

February 28, 2014

***VIA ELECTRONIC FILING  
AND OVERNIGHT DELIVERY***

Public Utility Commission of Oregon  
3930 Fairview Industrial Drive SE  
Salem, Oregon 97302-1166

Attn: Filing Center

**Re: UM 1681 PacifiCorp's Renewable Portfolio Standard Implementation Plan 2015-2019  
OAR 860-083-0400 Compliance Filing**

On December 26, 2013, PacifiCorp d/b/a Pacific Power (PacifiCorp or Company) filed its Oregon Renewable Portfolio Standard (RPS) Implementation Plan for the compliance years 2015-2019. The Company hereby submits for filing an updated RPS Implementation Plan for the compliance years 2015-2019. This filing is intended to replace the December 26, 2013 filing in its entirety. Confidential and public versions of the Implementation Plan are included in this submission. Also enclosed is a compact disk containing updated confidential work papers associated with this filing. The confidential information is provided under the provisions of OAR 860-001-0070.

The Company identified a calculation error in the carbon dioxide price assumptions that resulted in minor changes to the incremental costs of individual renewable resources and the total incremental cost of compliance that were identified in Tables 3-6 and Confidential Attachment D of the 2015-2019 RPS Implementation Plan. The correction did not impact the overall results of the RPS Implementation Plan and the four percent cost limit is not triggered.

At the request of other parties to this proceeding, the Company has included in its updated 2015-2019 RPS Implementation Plan an addendum that provide a summary of the incremental cost calculations on a resource-by-resource basis and total incremental costs of compliance for all of the scenarios analyzed in the report.

Confidential materials are provided under Protective Order 13-493.

PacifiCorp respectfully requests that all data requests in this docket be addressed to:

By e-mail (preferred): [datarequest@pacificorp.com](mailto:datarequest@pacificorp.com)

By regular mail:                      Data Request Response Center  
   PacifiCorp  
   825 NE Multnomah Street, Suite 2000  
   Portland, Oregon 97232

Informal questions concerning this filing may be directed to Gary Tawwater, Manager,  
Regulatory Affairs, at (503) 813-6805.

Sincerely,



R. Bryce Dalley  
Vice President, Regulation

Service List: UM 1681

## CERTIFICATE OF SERVICE

I certify that I served a true and correct copy of PacifiCorp's Errata to RPS Implementation Plan on the parties listed below via electronic mail and/or US mail in compliance with OAR 860-001-0180.

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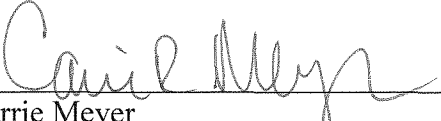
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Dated this 28<sup>th</sup> day of February 2014.

  
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Carrie Meyer  
Supervisor, Regulatory Operations

# **Pacific Power**

## **Renewable Portfolio Standard Oregon Implementation Plan 2015-2019**

**January 1, 2014**

(Updated February 28, 2014)

**PacifiCorp**  
**Renewable Portfolio Standard**  
**Oregon Implementation Plan**  
**2015 through 2019**

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Pursuant to ORS 469A.075 and OAR 860-083-0400, PacifiCorp, d.b.a. Pacific Power (the Company or PacifiCorp), respectfully submits the 2015 through 2019 Oregon Implementation Plan (the 2015-2019 Plan) to the Public Utility Commission of Oregon (Commission), for meeting the requirements of Oregon's renewable portfolio standard (RPS). This report was prepared consistent with the standardized form adopted by Order No. 11-440.

**Summary**

The 2015-2019 Plan shows that the Company intends to meet Oregon RPS targets during the 2015-2019 reporting period with a combination of bundled renewable energy certificates (RECs) from existing Oregon-allocated eligible renewable resources and unbundled RECs from Oregon eligible renewable resources.

The 2015-2019 Plan was prepared with information consistent with the Company's most recently filed Integrated Resource Plan (IRP) – the 2013 IRP.<sup>1</sup> The Company's IRP process and its filed documentation are based on the best available information at the time of the IRP preparation. The Company's 2013 IRP action plan (2013 IRP Action Plan) represents a road-map for implementation of the preferred portfolio. The 2013 IRP does not add any significant new renewable resources prior to 2024. The current economic and regulatory environments are continually changing, and the Company may modify its plans as specific events, legislation and regulations evolve. Such changes may materially impact resource acquisitions and the timing of those acquisitions.

In preparing the 2015-2019 Plan, the Company has included renewable resources that have been acquired or are under contract and that have received certification by the Oregon Department of Energy (ODOE) as eligible for the Oregon RPS. Additionally, the Company is using unbundled RECs purchased for compliance with the Oregon RPS as per the Company's application for deferred accounting of costs related to the purchase of RECs.<sup>2</sup> As shown in the 2015-2019 Plan, the existing resources and supplemental unbundled REC purchases will enable the Company to meet the 2015-2019 Oregon RPS targets.

The Company's prior implementation plan<sup>3</sup> (the 2013-2017 Plan) showed negative expected incremental costs (costs less than a proxy resource) for all resources. In contrast, the 2015-2019 Plan shows that, for some of the eligible resources, the expected incremental costs are positive (costs higher than a proxy resource) while, for other resources, the expected incremental costs remained negative. For resources that now show a positive expected incremental cost, the change is primarily due to the inclusion of firming costs that were not part of the 2013-2017

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<sup>1</sup> The Company's 2013 IRP was filed with the Commission on April 30, 2013, Docket LC 57. Where applicable, material differences between the 2013 IRP and the 2015-2019 Plan are identified.

<sup>2</sup> The Company's Application for Deferred Accounting Costs Related to the Purchase of REC Certificates was filed with the Commission on January 24, 2013, Docket UM 1646.

<sup>3</sup> The Company's 2013-2017 Plan was filed with the Commission on December 30, 2011, Docket UM 1570.

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Plan. However, the 2015-2019 Plan shows, using the methodology established by the rules adopted by the Commission, that the incremental costs do not trigger the four percent cost limit under ORS 469A.100.

**Implementation Plan**

The format used in the 2015-2019 Plan is to state each subsection of OAR 860-083-0400, followed by the Company’s response to each of the stated subsections.

|  |
|--|
| <b>OAR 860-083-0400(2)(a)</b>  |
| The annual megawatt-hour target for compliance with the applicable renewable portfolio standard based on the forecast of electricity sales to its Oregon retail electricity customers. |

**Response:** Table 1 below provides the estimated annual megawatt-hour (MWh) target for compliance, based on the October 2013 load forecast.<sup>4</sup>

| <b>Table 1</b>  | <b>2015</b> | <b>2016</b> | <b>2017</b> | <b>2018</b> | <b>2019</b> |
|---|-------------|-------------|-------------|-------------|-------------|
| Applicable RPS Standard as % of Electricity Sold          | 15%         | 15%         | 15%         | 15%         | 15%         |
| Estimated PacifiCorp Oregon RPS Target <sup>5</sup> (MWh) | 1,967,441   | 1,966,953   | 1,975,074   | 1,976,831   | 1,980,973   |

|  |
|--|
| <b>OAR 860-083-0400(2)(b)</b>  |
| An accounting of the planned method to comply with the applicable renewable portfolio standard, including number of banked renewable energy certificates by year of issuance, the numbers of other bundled and unbundled renewable energy certificates, and alternative compliance payments. |

**Response:** For the 2015-2019 Plan, the Company anticipates complying with the applicable Oregon RPS using bundled and unbundled RECs. **Attachment A** provides an accounting of the RECs applicable to the Oregon RPS program.

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<sup>4</sup> For OAR 860-083-0400(2)(a) in this 2015-2019 Plan, the Company used the October 2013 load forecast. The 2013 IRP uses a July 2012 load forecast.

<sup>5</sup> Refer to Attachment A.

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**OAR 860-083-0400(2)(c)**

Identification of generating facilities, either owned by the company or under contract, that are expected to provide renewable energy certificates for compliance with renewable portfolio standard. Information on each generating facility must include: (A) the renewable energy source; (B) the year the facility or contract became operational or is expected to become operational; (C) the state where the facility is located or is planned to be located; and (D) expected annual megawatt-hour output for compliance from the facility for the compliance years covered by the implementation plan.

**Response:** **Table 2** below shows the generating facilities that have been certified by ODOE as eligible for the Oregon RPS program. The generating facilities, either owned by the Company or under contract, are expected to provide bundled or unbundled RECs for compliance with the Oregon RPS during the 2015-2019 reporting period. However, there are additional generating facilities that may be eligible in the future, either Company owned or under contract. These facilities have not been included in the 2015-2019 Plan because they have not received certification from ODOE as eligible under the Oregon RPS program. The facilities that have not been included in the 2015-2019 Plan are (a) facilities for which the Company has pending applications with the Low Impact Hydro Institute for low impact hydro certification, (b) facilities associated with the Oregon Solar Incentive Program (OSIP)<sup>6</sup> that recently came on-line and for which the Company is in the process of submitting applications to ODOE, and (c) facilities that are being evaluated to determine if they are eligible for the Oregon RPS program under ORS 469A.025.

**Table 2** lists the year the generating facilities became operational, the energy source and the state where each facility is located. **Confidential Attachment B** provides the expected annual MWh output for each resource for compliance or the expected amount of REC purchases from each facility.

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<sup>6</sup> The Oregon Solar Incentive Program is implemented through PacifiCorp Schedules 136 and 137.

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| <b>Table 2</b>          |                                  |              |                                  |
|-------------------------|----------------------------------|--------------|----------------------------------|
| <b>Energy Source</b>    | <b>Generating Facility</b>       | <b>State</b> | <b>Commercial Operation Year</b> |
| <b>Biogas</b>           | Hill Air Force Base (PPA)        | UT           | 2005                             |
| <b>Geothermal</b>       | Blundell II                      | UT           | 2007                             |
| <b>Wind</b>             | Campbell Hill-Three Buttes (PPA) | WY           | 2009                             |
|                         | Chevron Casper Wind Farm (PPA)   | WY           | 2009                             |
|                         | Combine Hills (PPA)              | OR           | 2003                             |
|                         | Dunlap I                         | WY           | 2010                             |
|                         | Foote Creek I                    | WY           | 1999                             |
|                         | Glenrock I                       | WY           | 2008                             |
|                         | Glenrock III                     | WY           | 2009                             |
|                         | Goodnoe Hills                    | WA           | 2008                             |
|                         | High Plains                      | WY           | 2009                             |
|                         | Leaning Juniper I                | OR           | 2006                             |
|                         | Marengo                          | WA           | 2007                             |
|                         | Marengo II                       | WA           | 2008                             |
|                         | McFadden Ridge                   | WY           | 2009                             |
|                         | Mountain Wind Power (PPA)        | WY           | 2008                             |
|                         | Mountain Wind Power II (PPA)     | WY           | 2008                             |
|                         | Rock River I (PPA)               | WY           | 2001                             |
|                         | Seven Mile Hill I                | WY           | 2008                             |
| Seven Mile Hill II      | WY                               | 2008         |                                  |
| Top of the World (PPA)  | WY                               | 2010         |                                  |
| Wolverine Creek (PPA)   | ID                               | 2005         |                                  |
| <b>Hydro-Low Impact</b> | Ashton                           | ID           | 1917                             |
|                         | Clearwater 1                     | OR           | 1953                             |
|                         | Clearwater 2                     | OR           | 1953                             |
|                         | Cutler                           | UT           | 1927                             |
|                         | Fish Creek                       | OR           | 1952                             |
|                         | Oneida                           | ID           | 1915                             |
|                         | Prospect 3                       | OR           | 1932                             |
|                         | Slide Creek                      | OR           | 1951                             |
|                         | Soda                             | ID           | 1924                             |
|                         | Soda Springs                     | OR           | 1952                             |
|                         | Grace                            | ID           | 1923                             |
|                         | Lemolo 1                         | OR           | 1955                             |
|                         | Lemolo 2                         | OR           | 1956                             |
| Toketee                 | OR                               | 1950         |                                  |



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| <b>Table 2</b>                        |                               |              |                                  |
|---------------------------------------|-------------------------------|--------------|----------------------------------|
| <b>Energy Source</b>                  | <b>Generating Facility</b>    | <b>State</b> | <b>Commercial Operation Year</b> |
| <b>Hydro – Upgrades</b>               | Big Fork (Upgrade 2001)       | MT           | 1929                             |
|                                       | Copco 1 (Upgrade 1996)        | CA           | 1918                             |
|                                       | Cutler (Upgrade 2007)         | UT           | 1927                             |
|                                       | JC Boyle (Upgrade 2005)       | OR           | 1958                             |
|                                       | Lemolo 1 (Upgrade 2003)       | OR           | 1955                             |
|                                       | Lemolo 2 (Upgrade 2009)       | OR           | 1956                             |
|                                       | Oneida (Upgrade 2004)         | ID           | 1915                             |
|                                       | Pioneer (Upgrade 1999)        | UT           | 1897                             |
|                                       | Prospect 2 (Upgrade 1999)     | OR           | 1928                             |
|                                       | Prospect 3 (Upgrade 1997)     | OR           | 1932                             |
|                                       | Yale (Upgrade 1995/1996)      | WA           | 1953                             |
| <b>Oregon Solar Capacity Standard</b> | Black Cap <sup>7</sup>        | OR           | 2012                             |
| <b>Oregon Solar Incentive Program</b> | Joseph Community Solar        | OR           | 2011                             |
|                                       | Lakeview                      | OR           | 2012                             |
|                                       | Solwatt                       | OR           | 2012                             |
|                                       | Aggregated Solar Block (CO 1) | OR           | 2010                             |
|                                       | Aggregated Solar Block (CO 2) | OR           | 2011                             |
|                                       | Aggregated Solar Block (CO 3) | OR           | 2013                             |
|                                       | Aggregated Solar Block (CR 1) | OR           | 2011                             |
|                                       | Aggregated Solar Block (EO 1) | OR           | 2010                             |
|                                       | Aggregated Solar Block (EO 2) | OR           | 2011                             |
|                                       | Aggregated Solar Block (PO 1) | OR           | 2010                             |
|                                       | Aggregated Solar Block (PO 2) | OR           | 2013                             |
|                                       | Aggregated Solar Block (SO 1) | OR           | 2010                             |
|                                       | Aggregated Solar Block (SO 2) | OR           | 2011                             |
|                                       | Aggregated Solar Block (SO 3) | OR           | 2011                             |
|                                       | Aggregated Solar Block (SO 4) | OR           | 2012                             |
|                                       | Aggregated Solar Block (SO 5) | OR           | 2012                             |
|                                       | Aggregated Solar Block (SO 6) | OR           | 2013                             |
|                                       | Aggregated Solar Block (SO 7) | OR           | 2013                             |
|                                       | Aggregated Solar Block (WV 1) | OR           | 2010                             |
|                                       | Aggregated Solar Block (WV 2) | OR           | 2011                             |
|                                       | Aggregated Solar Block (WV 3) | OR           | 2012                             |
| Aggregated Solar Block (WV 4)         | OR                            | 2013         |                                  |
| Aggregated Solar Block (WV 5)         | OR                            | 2013         |                                  |
| Aggregated Solar Block (WV 6)         | OR                            | 2013         |                                  |

<sup>7</sup> The Company entered into a power purchase agreement to procure the output of this facility for the purposes of meeting PacifiCorp's solar capacity standard requirement set forth in ORS 757.370. The Black Cap facility has been certified by ODOE as RPS eligible and ODOE has identified the facility as generating RECs that may be counted twice for purposes of RPS compliance, pursuant to OAR 860-084-0070.

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| <b>Table 2</b>        |   |                    |              |                                |
|-----------------------|---|--------------------|--------------|--------------------------------|
| <b>Energy Source</b>  | <b>Generating Facility</b>                | <b>Fuel Source</b> | <b>State</b> | <b>Contract Execution Date</b> |
| <b>Unbundled RECs</b> | AgPower Jerome - Double A Dairy Digester  | Biogas             | ID           | 01/2013                        |
|                       | Dry Creek Landfill                        | Biogas             | OR           | 01/2013                        |
|                       | Finley Buttes Landfill Gas Power Plant    | Biogas             | OR           | 01/2013                        |
|                       | Finley Buttes Landfill Gas Power Plant II | Biogas             | OR           | 01/2013                        |
|                       | Rocky Reach Hydroelectric Project (C5)    | Hydro              | WA           | 02/2013                        |
|                       | Rocky Reach Hydroelectric Project (C6)    | Hydro              | WA           | 02/2013                        |
|                       | Rocky Reach Hydroelectric Project (C9)    | Hydro              | WA           | 02/2013                        |
|                       | Rocky Reach Hydroelectric Project (C11)   | Hydro              | WA           | 02/2013                        |
|                       | Condon Wind Power Project                 | Wind               | OR           | 02/2013                        |
|                       | Elkhorn Valley Wind Farm                  | Wind               | OR           | 01/2013, 02/2013               |
|                       | Footee Creek II                           | Wind               | WY           | 02/2013                        |
|                       | Hopkins Ridge                             | Wind               | WA           | 02/2013                        |
|                       | Kittitas Valley Wind Farm                 | Wind               | WA           | 01/2013, 02/2013               |
|                       | Klondike I                                | Wind               | OR           | 02/2013                        |
|                       | Klondike III                              | Wind               | OR           | 08/2013, 11/2013               |
|                       | Mountain View I                           | Wind               | CA           | 01/2013                        |
|                       | Mountain View II                          | Wind               | CA           | 01/2013                        |
|                       | Nine Canyon Phase 3                       | Wind               | WA           | 02/2013, 07/2013               |
|                       | Nine Canyon Wind Project                  | Wind               | WA           | 02/2013, 07/2013               |
|                       | Red Mesa                                  | Wind               | NM           | 06/2013                        |
|                       | Stateline (WA)                            | Wind               | WA           | 02/2013                        |
|                       | Vansycle II                               | Wind               | OR           | 06/2013                        |
|                       | Wild Horse                                | Wind               | WA           | 02/2013                        |
| Wild Horse Phase II   | Wind                                      | WA                 | 11/2013      |                                |

**OAR 860-083-0400(2)(d)**

A forecast of the expected incremental costs of new qualifying electricity for facilities or contracts planned for first operation in the compliance year, consistent with the methodology in OAR 860-083-0100.

**Response:** The Company's 2013 IRP preferred portfolio does not include any additional renewable resources in years 2015-2019 and, as such, no additional forecasted costs associated with new qualifying electric facilities or contracts planned for first operation in the reported compliance years have been included in the 2015-2019 Plan.

For purposes of calculating expected incremental costs, the Company did not include costs associated with the OSIP facilities or the Black Cap Solar facility in its forecast of incremental costs. The capacities associated with these facilities are less than 20 MW and pursuant to OAR 860-083-100(13)(a), the incremental cost for long term

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qualifying electricity facilities with capacity less than 20 MW are not required to be included in compliance reports or implementation plans.<sup>8</sup>

**OAR 860-083-0400(2)(e)**

A forecast of the expected incremental cost of compliance, the costs of using unbundled renewable energy certificates and alternative compliance payments for compliance, compared to annual revenue requirements, consistent with the methodologies in OAR 860-083-0100 and 860-083-0200, absent consideration of the cost limit in OAR 860-083-0300.

**Response:** **Confidential Attachment C** provides an explanation of the key assumptions that the Company used to forecast the expected incremental costs of renewable resources during the 2015-2019 reporting period, pursuant to OAR 860-083-0100 and Order No. 12-272 in docket UM 1570.

**Table 3** below shows the forecast of the expected incremental costs, on an Oregon-allocated basis, for the qualifying electricity for generating facilities or contracts in service after June 6, 2007. Qualifying generating facilities or contracts that went into service prior to June 6, 2007 are deemed to have zero incremental costs, pursuant to OAR 860-083-0100(1)(i).<sup>9</sup>

The forecast of expected incremental cost analysis uses Oregon's forecast system generation (SG) allocation factors from the October 2013 load forecast.

Using the September 2012 official forward price curve (OFPC) that was used as a base case in the 2013 IRP, **Table 3** below lists the incremental costs for each qualifying facility. The September 2012 OFPC reflects CO<sub>2</sub> price assumptions beginning at \$16/ton in 2022 with an annual real escalation rate of 3 percent thereafter.

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<sup>8</sup> OAR 860-083-100(13)(a) states that "Except as provided in section (11) of this rule, if new long-term qualifying electricity in a compliance year, including qualifying electricity treated in the same manner as new, qualifying electricity in subsections (4)(b) and (6)(g) of this rule, totals less than 20 megawatts of capacity, the incremental cost for such long-term qualifying electricity is not required to be included in compliance reports of implementation plans. Such long-term qualifying electricity may be included in a compliance report for purposes of determining compliance with the applicable renewable portfolio standard under ORS 469A.052 or 469A.065."

<sup>9</sup> OAR 860-083-0100(1)(h) states that "Incremental costs are deemed to be zero for qualifying electricity from generating facilities or contracts that became operational before June 6, 2007 and for certified low-impact hydroelectric facilities under ORS 469A.025(5)."

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**Table 3**

**2015-2019 Summary**  
**Oregon Allocated Nominal Levelized Incremental Costs (\$000)<sup>10</sup>**  
**For Specific Qualifying Resources**  
**September 2012 OFPC**

| Resource                         | 2015      | 2016      | 2017      | 2018      | 2019      |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|
| Blundell II                      | (\$1,195) | (\$1,189) | (\$1,183) | (\$1,173) | (\$1,173) |
| Campbell Hill-Three Buttes (PPA) | \$864     | \$860     | \$855     | \$849     | \$848     |
| Dunlap I                         | (\$512)   | (\$509)   | (\$507)   | (\$503)   | (\$503)   |
| Glenrock I                       | (\$309)   | (\$307)   | (\$306)   | (\$303)   | (\$303)   |
| Glenrock III                     | (\$2)     | (\$2)     | (\$2)     | (\$2)     | (\$2)     |
| Goodnoe Hills                    | \$842     | \$838     | \$834     | \$827     | \$827     |
| High Plains                      | \$433     | \$430     | \$428     | \$425     | \$425     |
| McFadden Ridge                   | (\$116)   | (\$115)   | (\$115)   | (\$114)   | (\$114)   |
| Marengo                          | (\$142)   | (\$142)   | (\$141)   | (\$140)   | (\$140)   |
| Marengo II                       | \$127     | \$126     | \$125     | \$124     | \$124     |
| Mountain Wind Power (PPA)        | (\$46)    | (\$46)    | (\$46)    | (\$45)    | (\$45)    |
| Mountain Wind Power II (PPA)     | \$421     | \$419     | \$417     | \$413     | \$413     |
| Seven Mile Hill I                | (\$1,175) | (\$1,169) | (\$1,163) | (\$1,154) | (\$1,153) |
| Seven Mile Hill II               | (\$223)   | (\$222)   | (\$221)   | (\$219)   | (\$219)   |
| Top of the World (PPA)           | \$1,713   | \$1,704   | \$1,695   | \$1,682   | \$1,681   |

For comparative purposes, the Company included in **Table 4** an additional sensitivity scenario based on the most recent OFPC dated November 8, 2013. As in the September 2012 OFPC, the November 8, 2013 OFPC reflects CO<sub>2</sub> price assumptions beginning at \$16/ton in 2022 with an annual real escalation rate of 3 percent thereafter.

<sup>10</sup> The incremental cost analysis assumptions include (1) 2022 \$16 carbon dioxide (CO<sub>2</sub>), (2) September 2012 Price Curve (medium gas curve), (3) Discount Rate from the 2013 IRP of 6.88%, and (4) Oregon's share based on forecast SG allocation factors based on the October 2013 load forecast.

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**Table 4**

**Additional Sensitivity Scenario**

**2015-2019 Summary**  
**Oregon Allocated Nominal Levelized Incremental Costs (\$000)<sup>11</sup>**  
**For Specific Qualifying Resources**  
**November 8, 2013 OFPC**

| Resource                         | 2015      | 2016      | 2017      | 2018      | 2019      |
|----------------------------------|-----------|-----------|-----------|-----------|-----------|
| Blundell II                      | (\$1,143) | (\$1,137) | (\$1,131) | (\$1,122) | (\$1,122) |
| Campbell Hill-Three Buttes (PPA) | \$1,089   | \$1,083   | \$1,078   | \$1,069   | \$1,069   |
| Dunlap I                         | (\$266)   | (\$265)   | (\$264)   | (\$261)   | (\$261)   |
| Glenrock I                       | (\$100)   | (\$99)    | (\$99)    | (\$98)    | (\$98)    |
| Glenrock III                     | \$79      | \$78      | \$78      | \$77      | \$77      |
| Goodnoe Hills                    | \$1,003   | \$997     | \$992     | \$984     | \$984     |
| High Plains                      | \$633     | \$629     | \$626     | \$621     | \$621     |
| McFadden Ridge                   | (\$60)    | (\$60)    | (\$59)    | (\$59)    | (\$59)    |
| Marengo                          | \$71      | \$71      | \$70      | \$70      | \$70      |
| Marengo II                       | \$241     | \$240     | \$239     | \$237     | \$237     |
| Mountain Wind Power (PPA)        | \$47      | \$47      | \$47      | \$46      | \$46      |
| Mountain Wind Power II (PPA)     | \$540     | \$537     | \$534     | \$530     | \$530     |
| Seven Mile Hill I                | (\$949)   | (\$944)   | (\$939)   | (\$932)   | (\$931)   |
| Seven Mile Hill II               | (\$179)   | (\$178)   | (\$177)   | (\$176)   | (\$176)   |
| Top of the World (PPA)           | \$2,168   | \$2,156   | \$2,145   | \$2,128   | \$2,127   |

**Confidential Attachment D** provides additional detail of the forecast of the expected incremental costs calculation, consistent with the methodology in OAR 860-083-0100, and the Company's 2013 IRP, as well as the additional sensitivity scenario based on the November 8, 2013 OFPC.

For the cost of unbundled RECs, the Company is assuming a price of \$0.73 per-REC based on the Company's executed unbundled REC contracts. The Company estimates the cost of 212,448 unbundled RECs that will be used in 2015 to be \$155,086.89.

**Tables 5 and 6** below show the forecast of the expected incremental cost of compliance, including the cost of unbundled RECs, compared to the annual revenue requirement for each year in the 2015-2019 reporting period. **Table 5** is based on the incremental cost forecast from **Table 3**. **Table 6** is based on the incremental cost

<sup>11</sup> The sensitivity analysis incremental cost assumptions include (1) 2022 \$16 CO<sub>2</sub>, (2) November 8, 2013 Price Curve (medium gas curve), (3) Discount Rate from the 2013 IRP of 6.88%, and (4) Oregon's share based on forecast SG allocation factors based on the October 2013 load forecast.

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forecast from the additional sensitivity scenario shown in **Table 4**. The Company's 2015-2019 Plan does not forecast the use of alternative compliance payments at this time to meet compliance. The 2015-2019 Plan forecasts the use of unbundled RECs to meet compliance, as noted above, the cost of the forecasted unbundled RECs is \$155,086.89. The Oregon allocated nominal levelized incremental cost was calculated by using an average \$/MWh based on the incremental cost calculations for each resource multiplied by the number of forecasted bundled RECs plus the forecasted cost of unbundled RECs for each compliance year.

The annual revenue requirement was calculated consistent with the methodology in OAR 860-083-0200. Pursuant to the rule, this methodology adjusts the last approved revenue requirement for forecasted load.<sup>12</sup> These tables show that the four percent cost limit is not triggered. Actual cost of compliance may vary from the calculations shown below.

**Table 5**

**Based on Table 3 Data**

|      | Oregon Allocated Nominal Levelized Incremental Cost (\$000s) |           |         | 4% of Oregon Annual Revenue Requirement (\$000s) | % Oregon Annual Revenue Requirement Threshold |
|------|--|-----------|---------|--|---|
|      | Bundled  | Unbundled | Total   |  |   |
| 2015 | \$1,205  | \$155     | \$1,360 | \$49,442   | 0.11%   |
| 2016 | \$1,351  | \$0       | \$1,351 | \$49,430   | 0.11%   |
| 2017 | \$1,356  | \$0       | \$1,356 | \$49,634   | 0.11%   |
| 2018 | \$1,357  | \$0       | \$1,357 | \$49,678   | 0.11%   |
| 2019 | \$1,360  | \$0       | \$1,360 | \$49,782   | 0.11%   |

<sup>12</sup> The Company used the most recently available load forecast: October 2013.

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**Table 6**

**Based on Table 4 Data**

|      | <b>Oregon Allocated Nominal Levelized Incremental Cost (\$000s)</b> |                  |              | <b>4% of Oregon Annual Revenue Requirement (\$000s)</b> | <b>% Oregon Annual Revenue Requirement Threshold</b> |
|------|---|------------------|--------------|---|--|
|      | <b>Bundled</b>  | <b>Unbundled</b> | <b>Total</b> |   |  |
| 2015 | \$5,625   | \$155            | \$5,780      | \$49,442  | 0.47%  |
| 2016 | \$6,305   | \$0              | \$6,305      | \$49,430  | 0.51%  |
| 2017 | \$6,331   | \$0              | \$6,331      | \$49,634  | 0.51%  |
| 2018 | \$6,336   | \$0              | \$6,336      | \$49,678  | 0.51%  |
| 2019 | \$6,350   | \$0              | \$6,350      | \$49,782  | 0.51%  |

**OAR 860-083-0400(2)(f)**

A forecast of the number and cost of bundled renewable energy certificates issued, consistent with the methodology in OAR 860-083-0100.

**Response:** Attachment A provides the forecasted number of bundled RECs. Tables 5 and 6 above include the costs for the bundled RECs included in the 2015-2019 Plan.

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**OAR 860-083-0400(4)**

If there are material differences in the planned actions in [OAR 860-083-0400(2)] of this rule from the action plan in the most recently filed or updated integrated resource plan by the electric company, or if conditions have materially changed from the conditions assumed in such filing, the company must provide sufficient documentation to demonstrate how the implementation plan appropriately balances risks and expected costs as required by the integrated resource planning guidelines in 1.b and c. of Commission Order No. 07-047 and subsequent guidelines related to implementation plans set forth by the Commission. Unless provided in the most recently filed or updated integrated resource plan, an implementation plan for an electric company subject to ORS 469A.052 must include the following information:

- (a) At least two forecasts for subsections (2)(d), (e), and (f) of this rule: one forecast assuming existing government incentives continue beyond their current expiration date and another forecast assuming existing government incentives do not continue beyond their current expiration date;
- (b) A reasonable range of estimates for the forecasts in subsections (2)(d), (e), and (f) of this rule, consistent with subsection (4)(a) of this rule and the analyses or methodologies in the company's most recently filed or updated integrated resource plan.

**Response:**

A material difference between the 2015-2019 Plan and the RPS Position Forecast included in the 2013 IRP<sup>13</sup> is the inclusion of unbundled RECs toward the annual compliance targets for Oregon starting in 2012 and continuing through 2015. As described in the 2013 IRP Action Plan, the Company intends to use unbundled RECs to meet state RPS compliance requirements. Specifically for Oregon, PacifiCorp will issue requests for proposals (RFPs) at least annually seeking historical, then current-year, or forward-year vintage unbundled RECs that will qualify for compliance with the Company's Oregon RPS obligations. As part of the solicitation and bid evaluation process, PacifiCorp will evaluate the tradeoffs between acquiring bankable RECs early as a means to mitigate potentially higher cost long-term compliance alternatives.<sup>14</sup>

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<sup>13</sup> See Figure 8.32 – Annual State and Federal RPS Position Forecasts using the Preferred Portfolio on page 233 of PacifiCorp's 2013 IRP.

<sup>14</sup> See the Company's 2013 IRP, Action Item 1b.



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In 2013, PacifiCorp issued an unbundled REC RFP and subsequently executed several contracts for the purchase of 600,000 unbundled RECs from Oregon RPS certified facilities. The Company included the 600,000 unbundled RECs in the 2015-2019 Plan and filed for deferral of the associated costs in docket UM 1646.

- (a) As noted in **Confidential Attachment C**, the Company assumes that existing government incentives expire in accordance with their current expiration date. A separate forecast assuming existing government incentives continue beyond their current expiration date is not applicable as there are no applicable renewable resources included in the Company's 2013 IRP Action Plan during the 2015-2019 reporting period. Accordingly, the Company's forecast of expected incremental cost analysis, whether or not existing government incentives continue beyond their current expiration date, would be identical.
- (b) **Confidential Attachment D** includes a range of forecasts for expected incremental costs. The summary results for the September 2012 OFPC are shown in **Table 3**. **Confidential Attachment D** also includes the additional sensitivity scenario, and the summary results are shown in **Table 4**.

**OAR 860-083-0400(5)**

Under the following circumstances, the electric company must, for the applicable compliance year, provide sufficient documentation or citations to demonstrate how the implementation plan appropriately balances risks and expected costs as required by the integrated resource planning guidelines in 1.b. and c. of Commission Order No. 07-047 and subsequent guidelines related to implementation plans set forth by the Commission.

- (a) The sum of costs in subsection (2)(e) of this rule is expected to be four percent or more of the annual revenue requirement in subsection (2)(e) of this rule for any compliance year covered by the implementation plan,
- (b) The company plans, for reasons other than to meet unanticipated contingencies that arise during a compliance year, to use any of the following compliance methods: (A) Unbundled renewable energy certificates; (B) Bundled renewable energy certificates issued between January 1 through March 31 of the year following the compliance year; or (C) Alternative compliance payments, or
- (c) The company plans to sell any bundled renewable energy certificates included in the rates of Oregon retail electricity consumers.

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**Response:** The Company provides the following responses:

- (a) This requirement is not applicable at this time since the sum of the costs in subsection (2)(e) above are not expected to exceed four percent of the annual revenue requirement in any compliance year that is reported in the Company's 2015-2019 Plan.
- (b) For the 2015 through 2019 reporting period, the Company expects to comply with the Oregon RPS requirements by using a combination of bundled and unbundled RECs. At this time, the Company plans to use (A) 212,448 unbundled RECs and does not plan to use any (B) bundled RECs issued between January 1 through March 31 of the year following the compliance year; or (C) alternative compliance payments.

Consistent with the 2013 IRP Action Plan, at least annually the Company will issue requests for proposals seeking historical, then current-year, or forward vintage unbundled RECs that will qualify for compliance with the Company's Oregon RPS obligations. As part of the solicitation and bid evaluation process, the Company will evaluate the tradeoffs between acquiring bankable RECs early as a means to mitigate potential higher compliance cost alternatives in the long-term. This will balance risks and expected costs as required by the IRP guidelines in 1.b. and c. of Commission Order No. 07-047 and subsequent guidelines related to implementation plans set forth by the Commission.

- (c) This requirement is not applicable at this time because the Company's plan does not include the sale of bundled Oregon-allocated RECs from RPS eligible renewable resources included in the rates of Oregon customers.

**OAR 860-083-0400(6)**

An implementation plan must provide a detailed explanation of how the implementation plan complies, or does not comply, with any conditions specified in a Commission acknowledgement order on the previous implementation plan and any relevant conditions specified in the most recent acknowledgement order on an integrated resource plan filed or updated by the electric company.

**Response:** In Order 12-272 in docket UM 1570, the Commission acknowledged PacifiCorp's 2013-2017 Plan with the following three conditions for the 2015-2019 Plan:

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- Include a “fuel cost hedging methodology . . . that at least captures transaction costs for purchasing fuel forwards.”<sup>15</sup>
  - The Company has included transaction costs associated with fuel purchases are added to the proxy resource costs to comply with Order No. 12-272. Specifically, actual broker fees associated with forward gas purchases are compared total gas consumption by the Company’s gas units for CY 2008-2012 are used to calculate an average annual historical gas transaction cost.
- Include “firming costs but not include shaping costs” in the incremental cost calculation.<sup>16</sup>
  - The Company has included firming costs associated with qualifying renewable resources which is the fixed cost of a simple cycle combustion turbine (SCCT) that has been added to the qualifying resource in order to create a capacity equivalent proxy resource for comparison to qualifying renewable resources supplying intermittent generation. The SCCT is sized to equal the difference between the respective capacity contribution of the proxy CCCT and the qualifying renewable resource. Incremental cost calculations do not include shaping costs, consistent with Order No. 12-272
- “[U]se the most recent fuel price forecast filed in [PacifiCorp’s] avoided cost or IRP proceeding” in the incremental cost calculation.”<sup>17</sup>
  - The following scenarios<sup>18</sup> are considered in the incremental cost analysis:
    - Medium CO2 and low proxy plant fuel costs
    - Medium CO2 and medium proxy plant fuel costs\*
    - Medium CO2 and high proxy plant fuel costs
    - High CO2 and medium proxy plant fuel costs\*
    - High CO2 and low proxy plant fuel costs\*
    - Zero CO2 and medium proxy plant fuel costs\*
    - Zero CO2 and high proxy plant fuel costs\*
    - For comparative purposes, the Company’s analysis includes an additional sensitivity scenario based on the most recent natural gas price forecast from the November 8, 2013 OFPC.

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<sup>15</sup> *In the Matter of PacifiCorp, dba Pacific Power, Renewable Portfolio Standard Implementation Plan 2013-2017, Docket UM 1570, Order 12-272 at Appendix A (July 2, 2012).*

<sup>16</sup> *Id.*

<sup>17</sup> *Id.*

<sup>18</sup> Scenarios marked with an asterisk are scenarios included in the 2013 IRP.

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There were no conditions specified in the Commission's acknowledgment order of the 2011 IRP specific to the Oregon RPS Implementation Plan.<sup>19</sup> The Company's 2013 IRP is ongoing and is pending Commission acknowledgement.

**OAR 860-083-0400(7)**

If there are funds in holding accounts under ORS 469A.180(4) and if the electric company has not filed a proposal for expending such funds for the purposes allowed under ORS 469A.180(5), the implementation plan must include the electric company's plans for expending or holding such funds. If the plan is to hold such funds, the plan should indicate under what conditions such funds should be expended.

**Response:** The Company does not have any funds in holding accounts authorized pursuant to ORS 469A.180(4). Accordingly, this requirement is not applicable at this time.

**OAR 860-083-0400(9)**

- (a) Each electric company must post on its website the public portion of its most recent implementation plan under this rule within 30 days after a Commission acknowledgement order has been issued, including any conditions specified by the Commission under ORS 469.075(3).
- (b) Each electric company must provide a copy of the public portions of the most recently filed implementation plan to any person upon request, until the Commission has issued an acknowledgement order on such plan.

**Response:** The Company will post the 2015-2019 Plan on its website within 30 days after a Commission acknowledgement order is issued. The Company will provide the public portions of the 2015-2019 Plan to any persons upon request.

**OAR 860-083-0400(10)**

Consistent with Commission orders for disclosure under OAR 860-038-0300, each electric company must provide information about the implementation plan to its customers by bill insert or other Commission-approved method. The information must be provided within 90 days of final action by the Commission on the plan or coordinated with the next available insert required under 860-038-0300. The information must include the URL address for the implementation plan posted under subsection (9)(a) of this rule.

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<sup>19</sup> *In the Matter of PacifiCorp 2011 Integrated Resource Plan*, Docket LC 57, Order 12-082 (Mar. 9, 2012).

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**Response:** In compliance with OAR 860-038-0300, the Company will provide information about the 2015-2019 Plan to its customers via bill inserts within 90 days of the final action by the Commission.

|                                       |
|---------------------------------------|
| <b>Oregon Solar Capacity Standard</b> |
|---------------------------------------|

|                         |
|-------------------------|
| <b>OAR 860-084-0080</b> |
|-------------------------|

|   |
|---|
| Each electric company must incorporate its plan to achieve, or exceed, and maintain the minimum solar photovoltaic capacity standards specified in OAR 860-084-0020 into its renewable portfolio standard implementation plans filed pursuant to OAR 860-083-0400 |
|---|

**Response:** PacifiCorp has procured 2.0MW<sub>AC</sub> of solar photovoltaic capacity out of the 8.7 MW<sub>AC</sub> required to meet PacifiCorp's solar capacity standard requirements. In order to procure the remaining 6.7 MW<sub>AC</sub> Oregon solar capacity requirement, PacifiCorp issued an RFP (2013S RFP) on April 30, 2013 with bids submitted June 11, 2013. Subsequently, PacifiCorp executed one power purchase agreement (PPA) for 5.0<sup>20</sup> and is in the process of negotiating a second PPA for 1.74. Both PPAs are scheduled to reach commercial operation by December 2014.

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<sup>20</sup> As part of the 2013S RFP process, the Company acquired a waiver of OAR 860-084-0040(2) from the Commission to allow one of the projects to oversize the DC solar panel installation to offset future degradation and maintain the full AC output of 5.0 MW through 2020.

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**Attachment A**

**Accounting of the RECs applicable to the  
RPS in Oregon**

|   | MWh     |           |           |           |           |           |           |           |           |           |           |           |           |
|---|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|   | 2007    | 2008      | 2009      | 2010      | 2011      | 2012      | 2013      | 2014      | 2015      | 2016      | 2017      | 2018      | 2019      |
|   | Actual  | Actual    | Actual    | Actual    | Actual    | Actual    | Forecast  | Forecast  | Forecast  | Forecast  | Forecast  | Forecast  | Forecast  |
| <b>Oregon Renewable Portfolio Standard Requirement<sup>(1)</sup></b>              | -       | -         | -         | -         | 650,729   | 638,940   | 648,264   | 650,557   | 1,967,441 | 1,966,953 | 1,975,075 | 1,976,831 | 1,980,973 |
| <b>Planned Compliance Method<sup>(2)</sup></b>                                    |         |           |           |           |           |           |           |           |           |           |           |           |           |
| Bundled RECs  |         |           |           |           | 650,729   | 511,152   | 518,611   | 520,446   | 1,754,993 | 1,966,953 | 1,975,075 | 1,976,831 | 1,980,973 |
| Unbundled RECs  |         |           |           |           |           | 127,788   | 129,653   | 130,111   | 212,448   |           |           |           |           |
| Bundled RECs by vintage year  | 355,038 | 572,302   | 822,402   | 1,247,291 | 1,776,846 | 1,588,069 | 1,489,331 | 1,601,124 | 1,582,938 | 1,579,897 | 1,566,746 | 1,545,234 | 1,552,383 |
| Unbundled RECs by vintage year  | 44,000  | 127,342   | -         | 8,356     | 122,916   | 243,819   | 53,567    |           |           |           |           |           |           |
| Cumulative Banked RECs minus RPS requirement by year of compliance <sup>(3)</sup> | 399,038 | 1,098,682 | 1,921,084 | 3,176,731 | 4,425,765 | 5,618,712 | 6,513,346 | 7,463,913 | 7,079,411 | 6,692,355 | 6,284,026 | 5,852,429 | 5,423,840 |
| Alternative compliance payments   |         |           |           |           |           |           |           |           |           |           |           |           |           |

**Notes**

(1) Based on Retail Load Forecast, October 2013

(2) 2013-2017 Implementation Plan - Attachment B - Oregon's Share Per Allocation Factors - Renewable Portfolio Standard Renewable Energy Credits (MWh), page 2

(3) Oldest RECs retired first for RPS compliance

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**Attachment B**

**Bundled and Unbundled RECs  
Expected Annual MWh Output  
(Total Company and Oregon Share)**

**(Redacted Version)**





Oregon's Share Per Allocation Factors - Renewable Portfolio Standard Renewable Energy Credits (MWh)

| Category              | State   | CO2e | MWh/GWh ID | 2005    | 2006    | 2007   | 2008      | 2009      | 2010      | 2011      | 2012      | 2013      | 2014      | 2015      | 2016      | 2017      | 2018      | 2019      | 2020      |           |
|-----------------------|---|------|------------|---------|---------|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|                       |   |      |            |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           | Actual    |
| BIOGAS                | UT  | 2005 | W1262      | 11,123  |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|                       | Total Biogas                                  |      |            | 11,123  |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| BIOMASS               | OR  | 1976 | W312       |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|                       | Total Biomass                                 |      |            |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| GEOHERMAL             | UT  | 2007 | W230       |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|                       | Total Geothermal                              |      |            |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| WIND                  | WV  | 2009 | W1383      |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|                       | CA  | 1918 | W142       |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| HYDRO                 | OR  | 1953 | W145       |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|                       | CA  | 1918 | W142       |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| SOLAR INCENTIVE PROG. | OR  | 2010 | W1686      |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
|                       | OR  | 2010 | W1686      |         |         |        |           |           |           |           |           |           |           |           |           |           |           |           |           |           |
| Total                 |   |      |            | 355,084 | 572,089 | 82,402 | 1,247,291 | 1,700,646 | 1,480,331 | 1,480,331 | 1,480,331 | 1,480,331 | 1,480,331 | 1,480,331 | 1,480,331 | 1,480,331 | 1,480,331 | 1,480,331 | 1,480,331 | 1,480,331 |
|                       | Oregon's Share Based on OG Allocation Factors |      |            |         | 37.44%  | 38.19% | 31.49%    | 36.30%    | 36.13%    | 36.13%    | 36.13%    | 36.13%    | 36.13%    | 36.13%    | 36.13%    | 36.13%    | 36.13%    | 36.13%    | 36.13%    | 36.13%    |

1) CO2e range computed according to Emission Factors  
 2) Oregon's share based on OG Allocation Factors  
 3) Based on final total amount of forward capacity contracts (FC) in Oregon  
 4) Oregon's share based on OG Allocation Factors  
 5) Oregon's share based on OG Allocation Factors  
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 94) Oregon's share based on OG Allocation Factors  
 95) Oregon's share based on OG Allocation Factors  
 96) Oregon's share based on OG Allocation Factors  
 97) Oregon's share based on OG Allocation Factors  
 98) Oregon's share based on OG Allocation Factors  
 99) Oregon's share based on OG Allocation Factors  
 100) Oregon's share based on OG Allocation Factors

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Attachment B - Unbundled RECs  
Page 1 of 1

| Compliance Purchases Oregon RPS (MWh) | Transaction Date | Fuel          | State | WREGIS ID | Commercial Operation Date | Price | 2007   | 2008    | 2009 | 2010  | 2011    | 2012    | 2013   |
|---------------------------------------|------------------|---------------|-------|-----------|---------------------------|-------|--------|---------|------|-------|---------|---------|--------|
|                                       | 1/25/2013        | Biogas        | ID    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Biogas        | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Biogas        | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 1/25/2013        |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | CA    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | CA    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 2/6/2013         |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Hydroelectric | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Hydroelectric | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Hydroelectric | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 2/11/2013        |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 2/6/2013         |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WY    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 1/31/2013        |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Biogas        | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 2/4/2013         |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 2/4/2013         |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 6/28/2013        |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | NM    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 2/28/2013        |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 7/9/2013         |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 8/28/2013        |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       | 11/5/2013        |               |       |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | OR    |           |                           |       |        |         |      |       |         |         |        |
|                                       |                  | Wind          | WA    |           |                           |       |        |         |      |       |         |         |        |
| Total                                 |                  |               |       |           |                           |       | 44,000 | 127,342 | 0    | 8,356 | 122,916 | 243,819 | 53,567 |

**PacifiCorp  
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**Attachment C**

**Preliminary Key Assumptions  
Incremental Cost Calculation**

**(Redacted Version)**

**PacifiCorp  
Renewable Portfolio Standard  
Oregon Implementation Plan  
2015 through 2019**

**Key Assumptions – Expected Incremental Cost Calculation**

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**Background**

As part of its compliance with ORS 469A, PacifiCorp is required to file an implementation plan with the Public Utility Commission of Oregon (Commission), by January 1, 2014 that provides, among other things, a forecast of expected incremental costs of renewable resources in service during the 2015-2019 Oregon Implementation Plan (2015-2019 Plan) reporting period. The expected incremental cost calculation compares the cost of renewable resources to the cost of a proxy plant, a combined cycle combustion turbine (unless otherwise specified by the Commission). The proxy plant used in this analysis is based on a combined cycle combustion turbine (water-cooled “F” class 2x1 with duct firing) at the Lake Side location. The annual expected incremental cost calculation for renewable resources in service during the 2015-2019 reporting period is the difference between the nominal levelized cost of the renewable resource and the nominal levelized cost of the proxy plant.

**Methodology**

The nominal levelized costs have been developed using an approach similar to that used to create the supply-side resource tables in Chapter 7 of the 2013 Integrated Resource Plan (IRP). For qualifying renewable resources currently in service, initial capital investment values, ongoing capital, and operation and maintenance (O&M) have been updated to reflect the most current information available. Actual ongoing capital and O&M values are used for historical period of 2007-2012. Data for renewable resources acquired through a power purchase agreement (PPA) reflect the associated contract terms.

Consistent with the 2013 IRP, a discount rate of 6.882% has been used in this expected incremental cost analysis. Payment factors used to calculate capital carrying costs have been modeled on a real levelized basis, with the effects of inflation removed, consistent with supply-side resources in the 2013 IRP.

Inflation values are based on the Company’s official inflation forecast. Where a calculation requires a single value, the 1.8% average annual inflation rate from 2013-2034 has been used. Otherwise, yearly values from the Company’s official inflation forecast have been applied.

PacifiCorp receives federal production tax credits (PTC) associated with owned wind projects, but does not from PPAs. Levelized PTC values for eligible resources have been adjusted to correspond to the in-service year of each resource.

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*Qualifying Resources*

**Table 1** provides the qualifying renewable resources that are included in the expected incremental cost calculation in the 2015-2019 Plan. There has been one change to the list of qualifying renewable resources since the Company's 2013-2017 Plan: the Chevron Casper Wind farm (PPA) is excluded since the contract term ends December 31, 2014.

| Resource                         | Assumed Capacity Factor (%) | In-Service Year | MW    | Design Plant Life / Contract Term (Years) |
|----------------------------------|-----------------------------|-----------------|-------|---|
| Blundell II                      |                             | 2007            | 10.0  | 26  |
| Campbell Hill-Three Buttes (PPA) |                             | 2009            | 99    | 20  |
| Dunlap I                         |                             | 2010            | 111.0 | 25  |
| Glenrock I                       |                             | 2008            | 99.0  | 25  |
| Glenrock III                     |                             | 2009            | 39.0  | 25  |
| Goodnoe Hills                    |                             | 2008            | 94.0  | 25  |
| High Plains                      |                             | 2009            | 99.0  | 25  |
| Marengo                          |                             | 2007            | 140.4 | 25  |
| Marengo II                       |                             | 2008            | 70.2  | 25  |
| McFadden Ridge                   |                             | 2009            | 28.5  | 25  |
| Mountain Wind Power (PPA)        |                             | 2008            | 60.9  | 25  |
| Mountain Wind Power II (PPA)     |                             | 2008            | 79.8  | 25  |
| Seven Mile Hill I                |                             | 2009            | 99.0  | 25  |
| Seven Mile Hill II               |                             | 2009            | 19.5  | 25  |
| Top of the World (PPA)           |                             | 2010            | 200.2 | 20  |

Capacity factors for existing renewable resources are based on the most current data available. Capacity factors for owned facilities and PPAs are calculated based on average generation over the life of facility or contract term and nameplate capacity. Generation values for 2007-2012 are actuals, generation amounts for 2013 is a combination of actual generation from January 2013 through September 2013 and forecasted values for the remainder of the year, and for years 2014 and beyond forecasted generation values were used.

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Table 2 provides information relating to the PPAs, including nominal prices, which are based on contract terms. The nominal prices do not include the cost of wind integration, which is added as an adjustment in the levelized cost calculation.

| <b>Resource</b>                  | <b>Contract Start Year</b> | <b>Contract Term (Years)</b> | <b>Average Capacity (MW)</b> | <b>PPA Contract Price (\$/MWh)</b> |
|----------------------------------|----------------------------|------------------------------|------------------------------|------------------------------------|
| Campbell Hill-Three Buttes (PPA) | 2009                       | 20                           | 99                           |                                    |
| Mountain Wind Power (PPA)        | 2008                       | 25                           | 60.9                         |                                    |
| Mountain Wind Power II (PPA)     | 2008                       | 25                           | 79.8                         |                                    |
| Top of the World (PPA)           | 2010                       | 20                           | 200.2                        |                                    |

The Company used wind integration costs from the Company's previously filed Oregon Transition Adjustment Mechanism (TAM) filings for calendar year (CY) 2007-2014. The most recent TAM filing for CY 2014 included integration costs based on PacifiCorp's 2012 Wind Study released in April 2013 as Appendix H to the 2013 IRP. Wind integration costs for 2015 and beyond are estimated by escalating 2014 values at inflation.

Actual Bonneville Power Administration (BPA) transmission costs for long-term and short-term point-to-point (PTP) transmission and scheduling charges have been included in the incremental cost calculation for Goodnoe Hills. Starting April 2013, Goodnoe Hills became part of PacifiCorp's control area, which resulted in the termination of BPA integration charges and the inclusion of PacifiCorp's integration cost going forward. The BPA wheeling costs going forward include only long-term PTP rates, and have been adjusted to reflect the outcome of BPA's most recent rate case starting in October 2013 and annual increases for inflation thereafter.

Renewable resources that have been excluded from the cost analysis are resources that have not been certified by Oregon Department of Energy as eligible under the Oregon RPS program, including facilities associated with the Oregon Solar Incentive Program and the Oregon Solar Capacity Standard, which are below the 20 MW threshold.

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Additionally, the Rolling Hills facility is currently not included in Oregon rates and has been excluded from this cost analysis.<sup>1</sup>

*Proxy Plant*

No new long-term qualifying electricity is contemplated in the 2015-2019 reporting period, therefore no new proxy plants have been added in this analysis. The existing proxy plant is from the 2008 IRP and is representative of a combined cycle combustion turbine (water-cooled “F” class 2x1 with duct firing) at the Lake Side location. The proxy plant’s characteristics remain unchanged from those stated in the 2013-2017 Plan analysis. Consistent with the 2013 IRP, fuel price data is from the Company’s September 2012 official forward price curve (OFPC) with natural gas delivered at the Lake Side location.

The following scenarios<sup>2</sup> are considered in the incremental cost analysis:

- Medium CO2 and low proxy plant fuel costs
- Medium CO2 and medium proxy plant fuel costs\*
- Medium CO2 and high proxy plant fuel costs
- High CO2 and medium proxy plant fuel costs\*
- High CO2 and low proxy plant fuel costs\*
- Zero CO2 and medium proxy plant fuel costs\*
- Zero CO2 and high proxy plant fuel costs\*

For comparative purposes, the Company’s analysis includes an additional sensitivity scenario based on the most recent natural gas price forecast from the November 8, 2013 OFPC.

Consistent with the discussion in Commission Order No. 09-299,<sup>3</sup> capital costs for the existing proxy plant remain unchanged from the Company’s 2013-2017 Plan.<sup>4</sup> The O&M for the existing proxy plant is also unchanged from the 2013-2017 Plan.

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<sup>1</sup>In the Matter of PacifiCorp, dba Pacific Power 2009 Renewable Adjustment Clause Schedule 202, Docket UE 200, Order 548 at 19-20 (Nov. 14, 2008)..

<sup>2</sup> Scenarios marked with an asterisk are scenarios included in the 2013 IRP.

<sup>3</sup> See Order No. 09-299 (August 3, 2009), AR 518 Phase III, page 4.

<sup>4</sup> The Company’s 2013-2017 Plan was filed with the Commission on December 30, 2011 in docket UM 1570.



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The proxy CCCT is sized to have the equal amount of annual energy output as the qualifying renewable resource. The proxy CCCT nameplate capacity is calculated as follows: *Proxy nameplate capacity = (RPS Resource nameplate capacity) X (RPS Resource capacity factor/Proxy CCCT capacity factor)* where the capacity factor of the proxy CCCT equals the capacity factor of a representative CCCT from the IRP. For this filing, we assumed a CCCT capacity factor of 51.5% (capacity weighted expected CF value for CCCT and duct firing units).

Consistent with Order No. 12-272 in UM 1570 requiring inclusion of firming costs associated with qualifying renewable resources, the fixed cost of a simple cycle combustion turbine (SCCT) is added to the qualifying resource in order to create a capacity equivalent proxy resource for comparison to qualifying renewable resources supplying intermittent generation. The SCCT is sized to equal the difference between the respective capacity contribution of the proxy CCCT and the qualifying renewable resource. Incremental cost calculations do not include shaping costs, consistent with Order No. 12-272.

Transaction costs associated with fuel purchases are added to the proxy resource costs to comply with Order No. 12-272. Specifically, actual broker fees associated with forward gas purchases are compared total gas consumption by the Company's gas units for CY 2008-2012 are used to calculate an average annual historical gas transaction cost of \$0.0001/MMBTU. Values for 2013 and beyond are estimated by applying annual inflation rates to the average annual historical gas transaction cost.

**Levelized Calculation**

The levelized calculation for each qualifying resource is based on the year that it is placed into service. Costs per MWh are escalated over the economic life of the resource. The annual cost per MWh is multiplied by the expected annual generation to develop the dollar cost in each year. Once the annual costs are calculated, the net present value of the costs (over the resource life) is calculated using a nominal discount rate, which is in turn used to calculate an annual nominal levelized value.

The proxy plant is similarly calculated with nominal levelized values aligned to the service years of each qualifying resource.

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Key Assumptions – Expected Incremental Cost Calculation

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Some simplifying assumptions have been made. For example, generation has been included for the full year of the qualifying resource's in-service year and economic lives of resources have been rounded to a full year.

**Expected Incremental Cost**

The annual calculated nominal levelized cost of the proxy plant is subtracted from the annual calculated nominal levelized cost of each qualifying renewable resource. This difference is the annual incremental nominal levelized cost. The incremental nominal levelized cost is presented for each year of the 2015-2019 reporting period, and has been calculated for each of the fuel price scenarios identified in the proxy plant discussion above.

**Allocation Factors**

Table 3 provides the forecast Oregon system generation (SG) allocation factors using the October 2013 load forecast.

| <b>Year</b> | <b>SG Allocation Factor</b> |
|-------------|-----------------------------|
| 2015        |                             |
| 2016        |                             |
| 2017        |                             |
| 2018        |                             |
| 2019        |                             |

**PacifiCorp  
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**Confidential Attachment D**

**Incremental Cost Analysis**

**Subject to Protective Order**

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SEPARATE COVER

**PacifiCorp  
Renewable Portfolio Standard Oregon  
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2015-2019**

**Addendum**

**PacifiCorp  
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**Scenarios 1-8**

**Summary of Incremental Cost by  
Resource**

**PacifiCorp Oregon - 2015-2019 RPS Implementation Plan  
2015 - 2019 Summary: RPS incremental costs by resource**

**Scenario 1: Zero CO2 and Medium Proxy Plant Fuel Costs**

|                            | 2015                               | 2016                               | 2017                               | 2018                               | 2019                               |
|----------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Resource                   | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) |
| Blundell II                | (\$1,096)                          | (\$1,090)                          | (\$1,085)                          | (\$1,076)                          | (\$1,075)                          |
| Campbell Hill-Three Buttes | \$1,181                            | \$1,175                            | \$1,169                            | \$1,160                            | \$1,159                            |
| Dunlap I                   | \$3                                | \$3                                | \$3                                | \$3                                | \$3                                |
| Glenrock                   | \$108                              | \$107                              | \$107                              | \$106                              | \$106                              |
| Glenrock III               | \$158                              | \$158                              | \$157                              | \$155                              | \$155                              |
| Goodnoe Hills              | \$1,144                            | \$1,138                            | \$1,132                            | \$1,124                            | \$1,123                            |
| High Plains                | \$831                              | \$826                              | \$822                              | \$816                              | \$815                              |
| McFadden Ridge             | (\$5)                              | (\$5)                              | (\$5)                              | (\$5)                              | (\$5)                              |
| Marengo                    | \$236                              | \$235                              | \$234                              | \$232                              | \$232                              |
| Marengo II                 | \$343                              | \$342                              | \$340                              | \$337                              | \$337                              |
| Mountain Wind Power        | \$130                              | \$129                              | \$129                              | \$128                              | \$128                              |
| Mountain Wind Power II     | \$645                              | \$642                              | \$639                              | \$634                              | \$633                              |
| Seven Mile Hill I          | (\$725)                            | (\$721)                            | (\$718)                            | (\$712)                            | (\$712)                            |
| Seven Mile Hill II         | (\$135)                            | (\$134)                            | (\$133)                            | (\$132)                            | (\$132)                            |
| Top of the World           | \$2,408                            | \$2,395                            | \$2,383                            | \$2,364                            | \$2,363                            |

**Scenario 2: Zero CO2 and High Proxy Plant Fuel Costs**

|                            | 2015                               | 2016                               | 2017                               | 2018                               | 2019                               |
|----------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Resource                   | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) |
| Blundell II                | (\$1,301)                          | (\$1,294)                          | (\$1,287)                          | (\$1,277)                          | (\$1,277)                          |
| Campbell Hill-Three Buttes | \$475                              | \$473                              | \$470                              | \$467                              | \$466                              |
| Dunlap I                   | (\$1,036)                          | (\$1,030)                          | (\$1,025)                          | (\$1,017)                          | (\$1,017)                          |
| Glenrock                   | (\$744)                            | (\$740)                            | (\$736)                            | (\$731)                            | (\$730)                            |
| Glenrock III               | (\$169)                            | (\$168)                            | (\$167)                            | (\$166)                            | (\$166)                            |
| Goodnoe Hills              | \$518                              | \$515                              | \$513                              | \$509                              | \$508                              |
| High Plains                | \$17                               | \$17                               | \$16                               | \$16                               | \$16                               |
| McFadden Ridge             | (\$232)                            | (\$230)                            | (\$229)                            | (\$227)                            | (\$227)                            |
| Marengo                    | (\$562)                            | (\$559)                            | (\$556)                            | (\$552)                            | (\$552)                            |
| Marengo II                 | (\$106)                            | (\$105)                            | (\$105)                            | (\$104)                            | (\$104)                            |
| Mountain Wind Power        | (\$236)                            | (\$235)                            | (\$233)                            | (\$232)                            | (\$231)                            |
| Mountain Wind Power II     | \$180                              | \$179                              | \$178                              | \$176                              | \$176                              |
| Seven Mile Hill I          | (\$1,645)                          | (\$1,636)                          | (\$1,628)                          | (\$1,615)                          | (\$1,614)                          |
| Seven Mile Hill II         | (\$316)                            | (\$314)                            | (\$313)                            | (\$310)                            | (\$310)                            |
| Top of the World           | \$889                              | \$884                              | \$880                              | \$873                              | \$872                              |

**PacifiCorp Oregon - 2015-2019 RPS Implementation Plan  
2015 - 2019 Summary: RPS incremental costs by resource**

**Scenario 3: Medium CO2 and Low Proxy Plant Fuel Costs**

|                            | 2015                               | 2016                               | 2017                               | 2018                               | 2019                               |
|----------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Resource                   | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) |
| Blundell II                | (\$1,007)                          | (\$1,001)                          | (\$996)                            | (\$988)                            | (\$988)                            |
| Campbell Hill-Three Buttes | \$1,563                            | \$1,554                            | \$1,547                            | \$1,534                            | \$1,534                            |
| Dunlap I                   | \$421                              | \$419                              | \$417                              | \$413                              | \$413                              |
| Glenrock                   | \$465                              | \$463                              | \$460                              | \$457                              | \$456                              |
| Glenrock III               | \$296                              | \$294                              | \$293                              | \$290                              | \$290                              |
| Goodnoe Hills              | \$1,419                            | \$1,411                            | \$1,404                            | \$1,393                            | \$1,392                            |
| High Plains                | \$1,173                            | \$1,167                            | \$1,161                            | \$1,152                            | \$1,151                            |
| McFadden Ridge             | \$90                               | \$90                               | \$89                               | \$89                               | \$89                               |
| Marengo                    | \$604                              | \$601                              | \$598                              | \$593                              | \$593                              |
| Marengo II                 | \$540                              | \$537                              | \$535                              | \$531                              | \$530                              |
| Mountain Wind Power        | \$290                              | \$289                              | \$287                              | \$285                              | \$285                              |
| Mountain Wind Power II     | \$849                              | \$845                              | \$840                              | \$834                              | \$833                              |
| Seven Mile Hill I          | (\$339)                            | (\$337)                            | (\$336)                            | (\$333)                            | (\$333)                            |
| Seven Mile Hill II         | (\$59)                             | (\$58)                             | (\$58)                             | (\$58)                             | (\$58)                             |
| Top of the World           | \$3,186                            | \$3,168                            | \$3,152                            | \$3,128                            | \$3,126                            |

**Scenario 4: Medium CO2 and Medium Proxy Plant Fuel Costs**

|                            | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) |
|----------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Resource                   | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) |
| Blundell II                | (\$1,195)                          | (\$1,189)                          | (\$1,183)                          | (\$1,173)                          | (\$1,173)                          |
| Campbell Hill-Three Buttes | \$864                              | \$860                              | \$855                              | \$849                              | \$848                              |
| Dunlap I                   | (\$512)                            | (\$509)                            | (\$507)                            | (\$503)                            | (\$503)                            |
| Glenrock                   | (\$309)                            | (\$307)                            | (\$306)                            | (\$303)                            | (\$303)                            |
| Glenrock III               | (\$2)                              | (\$2)                              | (\$2)                              | (\$2)                              | (\$2)                              |
| Goodnoe Hills              | \$842                              | \$838                              | \$834                              | \$827                              | \$827                              |
| High Plains                | \$433                              | \$430                              | \$428                              | \$425                              | \$425                              |
| McFadden Ridge             | (\$116)                            | (\$115)                            | (\$115)                            | (\$114)                            | (\$114)                            |
| Marengo                    | (\$142)                            | (\$142)                            | (\$141)                            | (\$140)                            | (\$140)                            |
| Marengo II                 | \$127                              | \$126                              | \$125                              | \$124                              | \$124                              |
| Mountain Wind Power        | (\$46)                             | (\$46)                             | (\$46)                             | (\$45)                             | (\$45)                             |
| Mountain Wind Power II     | \$421                              | \$419                              | \$417                              | \$413                              | \$413                              |
| Seven Mile Hill I          | (\$1,175)                          | (\$1,169)                          | (\$1,163)                          | (\$1,154)                          | (\$1,153)                          |
| Seven Mile Hill II         | (\$223)                            | (\$222)                            | (\$221)                            | (\$219)                            | (\$219)                            |
| Top of the World           | \$1,713                            | \$1,704                            | \$1,695                            | \$1,682                            | \$1,681                            |



**PacifiCorp Oregon - 2015-2019 RPS Implementation Plan  
2015 - 2019 Summary: RPS incremental costs by resource**

**Scenario 5: Medium CO2 and High Proxy Plant Fuel Costs**

|                            | 2015                               | 2016                               | 2017                               | 2018                               | 2019                               |
|----------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Resource                   | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) |
| Blundell II                | (\$1,366)                          | (\$1,359)                          | (\$1,352)                          | (\$1,341)                          | (\$1,341)                          |
| Campbell Hill-Three Buttes | \$275                              | \$273                              | \$272                              | \$270                              | \$270                              |
| Dunlap I                   | (\$1,379)                          | (\$1,371)                          | (\$1,364)                          | (\$1,353)                          | (\$1,353)                          |
| Glenrock                   | (\$1,020)                          | (\$1,015)                          | (\$1,009)                          | (\$1,001)                          | (\$1,001)                          |
| Glenrock III               | (\$275)                            | (\$273)                            | (\$272)                            | (\$270)                            | (\$270)                            |
| Goodnoe Hills              | \$319                              | \$317                              | \$316                              | \$313                              | \$313                              |
| High Plains                | (\$247)                            | (\$246)                            | (\$244)                            | (\$242)                            | (\$242)                            |
| McFadden Ridge             | (\$305)                            | (\$303)                            | (\$302)                            | (\$299)                            | (\$299)                            |
| Marengo                    | (\$810)                            | (\$806)                            | (\$802)                            | (\$796)                            | (\$795)                            |
| Marengo II                 | (\$249)                            | (\$247)                            | (\$246)                            | (\$244)                            | (\$244)                            |
| Mountain Wind Power        | (\$352)                            | (\$350)                            | (\$348)                            | (\$346)                            | (\$345)                            |
| Mountain Wind Power II     | \$32                               | \$32                               | \$32                               | \$31                               | \$31                               |
| Seven Mile Hill I          | (\$1,943)                          | (\$1,932)                          | (\$1,923)                          | (\$1,908)                          | (\$1,907)                          |
| Seven Mile Hill II         | (\$375)                            | (\$373)                            | (\$371)                            | (\$368)                            | (\$368)                            |
| Top of the World           | \$443                              | \$440                              | \$438                              | \$435                              | \$434                              |

**Scenario 6: High CO2 and Low Proxy Plant Fuel Costs**

|                            | 2015                               | 2016                               | 2017                               | 2018                               | 2019                               |
|----------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Resource                   | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) | Levelized Incremental Cost (\$000) |
| Blundell II                | (\$1,095)                          | (\$1,089)                          | (\$1,083)                          | (\$1,075)                          | (\$1,074)                          |
| Campbell Hill-Three Buttes | \$1,312                            | \$1,305                            | \$1,298                            | \$1,288                            | \$1,287                            |
| Dunlap I                   | (\$54)                             | (\$54)                             | (\$53)                             | (\$53)                             | (\$53)                             |
| Glenrock                   | \$87                               | \$87                               | \$87                               | \$86                               | \$86                               |
| Glenrock III               | \$151                              | \$150                              | \$149                              | \$148                              | \$148                              |
| Goodnoe Hills              | \$1,151                            | \$1,144                            | \$1,139                            | \$1,130                            | \$1,129                            |
| High Plains                | \$812                              | \$808                              | \$804                              | \$797                              | \$797                              |
| McFadden Ridge             | (\$10)                             | (\$10)                             | (\$10)                             | (\$10)                             | (\$10)                             |
| Marengo                    | \$275                              | \$274                              | \$272                              | \$270                              | \$270                              |
| Marengo II                 | \$348                              | \$346                              | \$344                              | \$341                              | \$341                              |
| Mountain Wind Power        | \$134                              | \$133                              | \$132                              | \$131                              | \$131                              |
| Mountain Wind Power II     | \$650                              | \$646                              | \$643                              | \$638                              | \$638                              |
| Seven Mile Hill I          | (\$747)                            | (\$743)                            | (\$739)                            | (\$733)                            | (\$733)                            |
| Seven Mile Hill II         | (\$139)                            | (\$138)                            | (\$137)                            | (\$136)                            | (\$136)                            |
| Top of the World           | \$2,616                            | \$2,601                            | \$2,588                            | \$2,568                            | \$2,566                            |

**PacifiCorp Oregon - 2015-2019 RPS Implementation Plan  
2015 - 2019 Summary: RPS incremental costs by resource**

**Scenario 7: High CO2 and Medium Proxy Plant Fuel Costs**

|                            | 2015  | 2016  | 2017  | 2018  | 2019  |
|----------------------------|---|---|---|---|---|
| <b>Resource</b>            | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> |
| Blundell II                | (\$1,330)   | (\$1,323)   | (\$1,316)   | (\$1,306)   | (\$1,305)   |
| Campbell Hill-Three Buttes | \$496   | \$494   | \$491   | \$487   | \$487   |
| Dunlap I                   | (\$1,246)   | (\$1,239)   | (\$1,232)   | (\$1,223)   | (\$1,222)   |
| Glenrock                   | (\$891)   | (\$886)   | (\$882)   | (\$875)   | (\$874)   |
| Glenrock III               | (\$225)   | (\$224)   | (\$223)   | (\$221)   | (\$221)   |
| Goodnoe Hills              | \$431   | \$428   | \$426   | \$423   | \$422   |
| High Plains                | (\$123)   | (\$123)   | (\$122)   | (\$121)   | (\$121)   |
| McFadden Ridge             | (\$270)   | (\$269)   | (\$268)   | (\$265)   | (\$265)   |
| Marengo                    | (\$644)   | (\$641)   | (\$637)   | (\$632)   | (\$632)   |
| Marengo II                 | (\$169)   | (\$168)   | (\$167)   | (\$166)   | (\$166)   |
| Mountain Wind Power        | (\$287)   | (\$285)   | (\$284)   | (\$281)   | (\$281)   |
| Mountain Wind Power II     | \$115   | \$115   | \$114   | \$113   | \$113   |
| Seven Mile Hill I          | (\$1,804)   | (\$1,794)   | (\$1,785)   | (\$1,771)   | (\$1,770)   |
| Seven Mile Hill II         | (\$347)   | (\$345)   | (\$344)   | (\$341)   | (\$341)   |
| Top of the World           | \$863   | \$859   | \$854   | \$848   | \$847   |

**Scenario 8: Nov 8 2013 OFPC**

|                            | 2015  | 2016  | 2017  | 2018  | 2019  |
|----------------------------|---|---|---|---|---|
| <b>Resource</b>            | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> | <b>Levelized<br/>Incremental<br/>Cost<br/>(\$000)</b> |
| Blundell II                | (\$1,143)   | (\$1,137)   | (\$1,131)   | (\$1,122)   | (\$1,122)   |
| Campbell Hill-Three Buttes | \$1,089   | \$1,083   | \$1,078   | \$1,069   | \$1,069   |
| Dunlap I                   | (\$266)   | (\$265)   | (\$264)   | (\$261)   | (\$261)   |
| Glenrock                   | (\$100)   | (\$99)  | (\$99)  | (\$98)  | (\$98)  |
| Glenrock III               | \$79  | \$78  | \$78  | \$77  | \$77  |
| Goodnoe Hills              | \$1,003   | \$997   | \$992   | \$984   | \$984   |
| High Plains                | \$633   | \$629   | \$626   | \$621   | \$621   |
| McFadden Ridge             | (\$60)  | (\$60)  | (\$59)  | (\$59)  | (\$59)  |
| Marengo                    | \$71  | \$71  | \$70  | \$70  | \$70  |
| Marengo II                 | \$241   | \$240   | \$239   | \$237   | \$237   |
| Mountain Wind Power        | \$47  | \$47  | \$47  | \$46  | \$46  |
| Mountain Wind Power II     | \$540   | \$537   | \$534   | \$530   | \$530   |
| Seven Mile Hill I          | (\$949)   | (\$944)   | (\$939)   | (\$932)   | (\$931)   |
| Seven Mile Hill II         | (\$179)   | (\$178)   | (\$177)   | (\$176)   | (\$176)   |
| Top of the World           | \$2,168   | \$2,156   | \$2,145   | \$2,128   | \$2,127   |

**PacifiCorp  
Renewable Portfolio Standard Oregon  
Implementation Plan  
2015-2019**

**Scenarios 1 - 8**

**Summary of Incremental Cost of  
Compliance**

**PacifiCorp Oregon - 2015-2019 RPS Implementation Plan**  
**2015 - 2019 Summary: RPS Total Incremental Cost of Compliance**

**Scenario 1: Zero CO2 and Medium Proxy Plant Fuel Costs**

|      | Incremental Costs |                    |                | 4% Annual Revenue Requirement<br>(\$000s) | Percent of Annual Revenue Requirement |
|------|-------------------|--------------------|----------------|---|---------------------------------------|
|      | Bundled (\$000s)  | Unbundled (\$000s) | Total (\$000s) |   |                                       |
| 2015 | \$9,270           | \$155              | \$9,425        | \$49,442                                  | 0.76%                                 |
| 2016 | \$10,389          | \$0                | \$10,389       | \$49,430                                  | 0.84%                                 |
| 2017 | \$10,432          | \$0                | \$10,432       | \$49,634                                  | 0.84%                                 |
| 2018 | \$10,441          | \$0                | \$10,441       | \$49,678                                  | 0.84%                                 |
| 2019 | \$10,463          | \$0                | \$10,463       | \$49,782                                  | 0.84%                                 |

**Scenario 2: Zero CO2 and High Proxy Plant Fuel Costs**

|      | Incremental Costs |                    |                | 4% Annual Revenue Requirement<br>(\$000s) | Percent of Annual Revenue Requirement |
|------|-------------------|--------------------|----------------|---|---------------------------------------|
|      | Bundled (\$000s)  | Unbundled (\$000s) | Total (\$000s) |   |                                       |
| 2015 | (\$7,569)         | \$155              | (\$7,414)      | \$49,442                                  | -0.60%                                |
| 2016 | (\$8,483)         | \$0                | (\$8,483)      | \$49,430                                  | -0.69%                                |
| 2017 | (\$8,518)         | \$0                | (\$8,518)      | \$49,634                                  | -0.69%                                |
| 2018 | (\$8,526)         | \$0                | (\$8,526)      | \$49,678                                  | -0.69%                                |
| 2019 | (\$8,544)         | \$0                | (\$8,544)      | \$49,782                                  | -0.69%                                |

**Scenario 3: Medium CO2 and Low Proxy Plant Fuel Costs**

|      | Incremental Costs |                    |                | 4% Annual Revenue Requirement<br>(\$000s) | Percent of Annual Revenue Requirement |
|------|-------------------|--------------------|----------------|---|---------------------------------------|
|      | Bundled (\$000s)  | Unbundled (\$000s) | Total (\$000s) |   |                                       |
| 2015 | \$16,832          | \$155              | \$16,987       | \$49,442                                  | 1.37%                                 |
| 2016 | \$18,865          | \$0                | \$18,865       | \$49,430                                  | 1.53%                                 |
| 2017 | \$18,943          | \$0                | \$18,943       | \$49,634                                  | 1.53%                                 |
| 2018 | \$18,960          | \$0                | \$18,960       | \$49,678                                  | 1.53%                                 |
| 2019 | \$19,000          | \$0                | \$19,000       | \$49,782                                  | 1.53%                                 |

**Scenario 4: Medium CO2 and Medium Proxy Plant Fuel Costs**

|      | Incremental Costs |                    |                | 4% Annual Revenue Requirement<br>(\$000s) | Percent of Annual Revenue Requirement |
|------|-------------------|--------------------|----------------|---|---------------------------------------|
|      | Bundled (\$000s)  | Unbundled (\$000s) | Total (\$000s) |   |                                       |
| 2015 | \$1,205           | \$155              | \$1,360        | \$49,442                                  | 0.11%                                 |
| 2016 | \$1,351           | \$0                | \$1,351        | \$49,430                                  | 0.11%                                 |
| 2017 | \$1,356           | \$0                | \$1,356        | \$49,634                                  | 0.11%                                 |
| 2018 | \$1,357           | \$0                | \$1,357        | \$49,678                                  | 0.11%                                 |
| 2019 | \$1,360           | \$0                | \$1,360        | \$49,782                                  | 0.11%                                 |

**Scenario 5: Medium CO2 and High Proxy Plant Fuel Costs**

|      | Incremental Costs |                    |                | 4% Annual Revenue Requirement | Percent of Annual Revenue Requirement |
|------|-------------------|--------------------|----------------|-------------------------------|---------------------------------------|
|      | Bundled (\$000s)  | Unbundled (\$000s) | Total (\$000s) | (\$000s)                      |                                       |
| 2015 | (\$12,859)        | \$155              | (\$12,704)     | \$49,442                      | -1.03%                                |
| 2016 | (\$14,412)        | \$0                | (\$14,412)     | \$49,430                      | -1.17%                                |
| 2017 | (\$14,472)        | \$0                | (\$14,472)     | \$49,634                      | -1.17%                                |
| 2018 | (\$14,484)        | \$0                | (\$14,484)     | \$49,678                      | -1.17%                                |
| 2019 | (\$14,515)        | \$0                | (\$14,515)     | \$49,782                      | -1.17%                                |

**Scenario 6: High CO2 and Low Proxy Plant Fuel Costs**

|      | Incremental Costs |                    |                | 4% Annual Revenue Requirement | Percent of Annual Revenue Requirement |
|------|-------------------|--------------------|----------------|-------------------------------|---------------------------------------|
|      | Bundled (\$000s)  | Unbundled (\$000s) | Total (\$000s) | (\$000s)                      |                                       |
| 2015 | \$9,736           | \$155              | \$9,891        | \$49,442                      | 0.80%                                 |
| 2016 | \$10,912          | \$0                | \$10,912       | \$49,430                      | 0.88%                                 |
| 2017 | \$10,957          | \$0                | \$10,957       | \$49,634                      | 0.88%                                 |
| 2018 | \$10,966          | \$0                | \$10,966       | \$49,678                      | 0.88%                                 |
| 2019 | \$10,989          | \$0                | \$10,989       | \$49,782                      | 0.88%                                 |

**Scenario 7: High CO2 and Medium Proxy Plant Fuel Costs**

|      | Incremental Costs |                    |                | 4% Annual Revenue Requirement | Percent of Annual Revenue Requirement |
|------|-------------------|--------------------|----------------|-------------------------------|---------------------------------------|
|      | Bundled (\$000s)  | Unbundled (\$000s) | Total (\$000s) | (\$000s)                      |                                       |
| 2015 | (\$9,629)         | \$155              | (\$9,474)      | \$49,442                      | -0.77%                                |
| 2016 | (\$10,792)        | \$0                | (\$10,792)     | \$49,430                      | -0.87%                                |
| 2017 | (\$10,837)        | \$0                | (\$10,837)     | \$49,634                      | -0.87%                                |
| 2018 | (\$10,846)        | \$0                | (\$10,846)     | \$49,678                      | -0.87%                                |
| 2019 | (\$10,869)        | \$0                | (\$10,869)     | \$49,782                      | -0.87%                                |

**Scenario 8: Nov 8 2013 OFPC**

|      | Incremental Costs |                    |                | 4% Annual Revenue Requirement | Percent of Annual Revenue Requirement |
|------|-------------------|--------------------|----------------|-------------------------------|---------------------------------------|
|      | Bundled (\$000s)  | Unbundled (\$000s) | Total (\$000s) | (\$000s)                      |                                       |
| 2015 | \$5,625           | \$155              | \$5,780        | \$49,442                      | 0.47%                                 |
| 2016 | \$6,305           | \$0                | \$6,305        | \$49,430                      | 0.51%                                 |
| 2017 | \$6,331           | \$0                | \$6,331        | \$49,634                      | 0.51%                                 |
| 2018 | \$6,336           | \$0                | \$6,336        | \$49,678                      | 0.51%                                 |
| 2019 | \$6,350           | \$0                | \$6,350        | \$49,782                      | 0.51%                                 |