**BEFORE THE WASHINGTON UTILITIES AND TRANSPORTATION COMMISSION**

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| **In the Matter of****EVALUATING ELECTRIC UTILITY RENEWABLE PORTFOLIO STANDARD REPORTS UNDER THE ENERGY INDEPENDENCE ACT,** **RCW 19.285 and WAC 480-109** | **DOCKET UE-120791 - Avista Corporation** **DOCKET UE-120802 - Puget Sound Energy****DOCKET UE-120813 - Pacific Power and Light Company dba PacifiCorp** |

**STAFF COMMENTS OF**

**THE WASHINGTON UTILITIES**

**AND**

**TRANSPORTATION COMMISSION**

**July 16, 2012**

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# Introduction

The Energy Independence Act (EIA), RCW 19.285, was voted into law in 2006 and requires utilities to acquire renewable energy resources. Pursuant to RCW 19.285.070 and WAC 480-109-040, the three regulated electric utilities submitted the Renewable Portfolio Standard Reports (RPS Reports) to the Washington Utilities and Transportation Commission (Commission), detailing each company’s progress in meeting the renewable portfolio standard (RPS) targets established in RCW 19.285.040. The first year utilities are required to submit the reports is 2012, so the Commission Staff (Staff) comments below reflect the first opportunity to review the actions taken and results achieved by the utilities under WAC 480‑109‑040.

As required by law,[[1]](#footnote-1) the RPS reports were filed on June 1, 2012, by Avista Corporation (Avista) in Docket UE‑120791; by Pacific Power and Light Company dba PacifiCorp (PacifiCorp) in Docket UE‑120813; and by Puget Sound Energy (PSE) in Docket UE‑120802. The EIA requires large electric utilities with over 25,000 Washington customers to obtain 15 percent of their electricity from new renewable resources by 2020, with gradually increasing intermediate targets. The first compliance year is 2012, when utilities must meet three percent of estimated load with eligible renewable energy resources (RCW 19.285.040). The companies are required to submit annual reports on June 1 of each year, beginning in 2012.[[2]](#footnote-2)

The 2012 RPS reports describe acquisition of Renewable Energy Credits (RECs) or eligible renewable resources. The RPS reports from Avista and PacifiCorp include electricity from hydroelectric efficiency upgrades. All three companies identified their plans for meeting the renewable energy targets through the remainder of 2012.

Staff’s comments will provide:

* An analysis of the RPS reports submitted by the companies.
* An analysis of issues common to all three companies.
* A recommendation to approve the reports from all three companies as having met the reporting requirements in RCW 19.285 and WAC 480-109.
* A recommendation to defer final determination of compliance in meeting 2012 renewable energy targets until certain conditions are met, but no later than June 1, 2014.
* A recommendation to set a 30-day deadline for companies to retire RECs following final determination of compliance.
* A recommendation to hold additional workshops as necessary through the Renewable Portfolio Standards Working Group (UE-110523) and to consult with the United States Army Corps of Engineers to evaluate incremental hydro methodologies.
* A recommendation to open a rulemaking process to update WAC 480-109.

# Background, Law and Application

Over the past decade there has been much debate about how the United States should generate electricity. Policy-makers have sought ways to increase the diversity of energy sources, reduce air pollution, and sustain harvestable fish populations while maintaining a reliable and affordable electricity supply. Among the programs that have been proposed are Renewable Portfolio Standards, which require retail sellers of electric power to obtain a certain percentage of their power from renewable resources, such as wind, solar, or geothermal resources.

Although a federal RPS has not been enacted, 29 states have enacted Renewable Portfolio Standards, including Washington State.[[3]](#footnote-3) Washington voters approved the Energy Independence Act in the 2006 general election. Now codified as Chapter 19.285 of the Revised Code of Washington, the EIA establishes a Renewable Portfolio Standard. RCW 19.285.040(2)(a) requires electric utilities with more than 25,000 customers in the state of Washington to do the following:

Each qualifying utility shall use eligible renewable resources or acquire equivalent renewable energy credits, or a combination of both, to meet the following annual targets:

(i) At least three percent of its load by January 1, 2012, and each year thereafter through December 31, 2015;

(ii) At least nine percent of its load by January 1, 2016, and each year thereafter through December 31, 2019; and

(iii) At least fifteen percent of its load by January 1, 2020, and each year thereafter.

Utilities may acquire nine types of eligible renewable resources to be in compliance with the law, including wind, solar, and geothermal energy.[[4]](#footnote-4) A renewable resource is “eligible” if the generation facility started operating after March 31, 1999, in the Pacific Northwest south of Canada.[[5]](#footnote-5) Certain types of facilities may qualify for multiplier credits.[[6]](#footnote-6) With the exception of incremental hydroelectric efficiency improvements, fresh water hydroelectricity is not considered an eligible renewable resource.[[7]](#footnote-7) Electricity generated outside the Pacific Northwest is “eligible” only under limited circumstances.

Utilities may also acquire RECs, also called “green tags,” which are tradable certificates of proof of generation from one megawatt-hour of an eligible renewable resource.[[8]](#footnote-8) The credits can be bought and sold in the marketplace.[[9]](#footnote-9) A renewable energy credit may be used once for RPS compliance, either during the year in which it is produced or during the preceding or subsequent year to the target year.[[10]](#footnote-10)

The statute provides utilities with four means of RPS compliance. A utility may:

● Meet the targets by using eligible renewable resources, acquiring renewable energy credits, or some combination of those two.[[11]](#footnote-11)

● Invest at least four percent of its total annual retail revenue requirement on some combination of eligible renewable resources and renewable energy credits.[[12]](#footnote-12)

● Make certain showings about its load, electricity purchases, and investments in eligible renewable resources and renewable energy credits.[[13]](#footnote-13)

● Show that events beyond the utility’s reasonable control prevented it from meeting the target.[[14]](#footnote-14)

Beginning in 2012, investor-owned utilities must report to the Commission, and all utilities subject to the EIA must report to the Washington Department of Commerce, on their progress in meeting the statutory renewable energy targets.[[15]](#footnote-15) The Commission has authority to determine whether investor-owned utilities meet the RPS established in RCW 19.285.[[16]](#footnote-16) The State Auditor has authority to audit compliance by utilities that are not investor-owned.[[17]](#footnote-17) A utility that fails to meet the targets must pay a penalty of $50 for each megawatt-hour of shortfall.[[18]](#footnote-18)

RCW 19.285.080 authorizes the Commission to “adopt rules to ensure the proper implementation and enforcement of this chapter as it applies to investor-owned utilities.”[[19]](#footnote-19) In 2007, the Commission adopted a set of rules to implement the law, which are now Chapter 480‑109 of the Washington Administrative Code.[[20]](#footnote-20) The Washington Department of Commerce has adopted rules to guide compliance by utilities that are not investor-owned.[[21]](#footnote-21)

For the current filing, Staff is unable to conclude that the companies have met the 2012 target because RECs produced during the remainder of 2012 and in 2013 may be applied toward meeting the 2012 target. As a result, Commission Staff will analyze whether regulated utilities appear to be “on track” to meet the 2012 renewable energy target if they demonstrate through some combination of renewable resources acquired that they:

* own eligible renewable resources to meet the target, or
* have contracts for eligible renewable resources to meet the target, or
* have contracts for RECs to meet the target.

# Renewable Portfolio Standards Workgroup

In order to evaluate the RPS reports submitted by the regulated electric utilities, the Commission must be provided adequate information and supporting documentation. To facilitate compliance with the Energy Independence Act, the Commission Staff initiated a coordinated and methodical planning effort through a Staff investigation, Docket UE‑110523.

Docket UE‑110523 was opened in March of 2011 and a series of workshops, discussions and informal negotiations facilitated by Commission Staff were completed in March of 2012 in what was called the Renewable Portfolio Standards Workgroup. The workshops were scheduled monthly through 2011 and 2012, and consensus documents on reporting expectations and incremental hydropower methodologies were filed in docket UE‑110523. The RPS workgroup participants included representatives from Commission Staff; the Investor Owned Utilities; the Department of Commerce; the Office of the State Auditor; the Public Counsel Unit of the Attorney General’s office; Oregon Department of Energy; California Department of Energy; Snohomish County Public Utility District; Tacoma Power; Northwest Energy Coalition; and Renewable Northwest Project.

Through the RPS workgroup, Staff sought to develop a consistent reporting model. The RPS workgroup also addressed legal requirements, timelines, public participation, and interested parties’ access to data. Analyses supporting the RPS workgroup recommendations were conducted by an informal Technical Working Group that included representatives from Commission Staff and Department of Commerce staff.[[22]](#footnote-22)

Throughout the RPS workgroup process, Staff asked each investor-owned electric utility to file a draft RPS report for review and comment by Staff before June 1, 2012, so that Staff could work with the companies on the content and format of the reports.[[23]](#footnote-23) In first workshop discussions of March 2011, Staff requested such drafts to be submitted no later than April 2012. Only Avista accepted the opportunity to receive Staff comments before the June 1, 2012, filing deadline. Avista submitted two rounds of reporting drafts, and made experts available to explain the materials and to respond to questions from Staff.

Representatives from the California Department of Energy and the Oregon Department of Energy provided invaluable insight into those states’ requirements and reporting standards. Oregon contributed engineering expertise, and shared recommendations from the United States Army Corps of Engineers on incremental hydroelectric generation analysis methods. Oregon Department of Energy Staff used the work of the Washington Commission Staff to choose a specific model for hydro (model #2) for Oregon and PacifiCorp’s Oregon RPS report.

# Western Renewable Energy Generation Information System (WREGIS)

The Western Renewable Energy Generation Information System (WREGIS) is an independent, renewable energy tracking system for the region covered by the Western Electricity Coordinating Council. WREGIS tracks renewable energy generation from units that register in the system using verifiable data, and creates renewable energy certificates for this generation. WREGIS Certificates can be used to verify compliance with state regulatory requirements. An unresolved issue with respect to determining compliance in Washington is the lack of a Washington WREGIS administrator who can verify that a particular REC in the WREGIS system satisfies the requirements of RCW Chapter 19.285. Legislation enacted in 2012 may enable the Washington Department of Commerce to take on that role.[[24]](#footnote-24) The process is currently under development at the Department of Commerce.

# Incremental Hydropower Electricity Calculation Methodologies

Under certain circumstances, incremental electricity produced as a result of hydropower efficiency improvements completed after March 31, 1999, may qualify as an eligible renewable resource for purposes of meeting the renewable energy targets of the Energy Independence Act.[[25]](#footnote-25) The statute is clear that RECs cannot be created from incremental hydropower,[[26]](#footnote-26) but it is silent about selling incremental hydropower when no RECs are created or registered. The Department of Commerce has taken the position that incremental hydropower, when sold with its environmental attributes, should be treated in exactly the same manner as when one utility sells another utility wind power when no RECs are created or registered.[[27]](#footnote-27) In the filings currently before the Commission, Avista and PacifiCorp report that they are using some incremental hydropower purchased from Grant County Public Utility District, as well as incremental hydropower from facilities that they own in the Pacific Northwest.

Hydro modeling tools, requirements and methods may vary significantly across utilities and individual hydro projects due to: multi-jurisdictional requirements; relative significance of hydro in each utility’s portfolio; plans for additional hydro improvements; varying needs for hydro data and analysis tools; and type of hydro project (storage vs. run of river).[[28]](#footnote-28)

Electricity generated by upgrades does not necessarily correlate with inflow. Because of the different efficiency curves under different flow patterns, it may be possible at some generation facilities to generate more eligible incremental renewable electricity in a poor water year than during a high water year. Some methods for calculating incremental hydro provide more stable year-to-year renewable electricity quantities than others. Volatile flow levels could lead utilities to acquire excess renewable electricity to ensure compliance in low years, and thus lead to higher costs for customers. Because the EIA does not permit the creation of RECs from incremental hydroelectric generation, electricity attributable to hydropower efficiency improvements may be used for RPS compliance only in the year in which it is generated. That makes year-to-year predictability particularly important. The inability to trade these attributes limits a utility’s ability to use excess hydro generation in surplus years to offset shortages in deficit years.

The RPS workgroup agreed on three optional methodologies for calculating incremental hydroelectric efficiency improvements. The amount of renewable electricity from incremental hydro improvements will vary from year to year, depending on the calculation method used. Over time, however, each of the methods outlined below can be expected to result in roughly equivalent quantities. Given the differences in modeling tools, requirements and methods across utilities and between individual projects, each utility selected the method most appropriate to its projects, circumstances, and the improvements being quantified.

Each method considers the hydroelectric system configuration in two steady states: electricity produced by the system *without* incremental improvements and electricity produced by the system *with* incremental improvements. The difference between the first and second state determines the incremental renewable electricity attributable to the improvements.

The three optional incremental hydroelectric generation methods that the RPS Workgroup suggested appropriate are:

Method 1: Annual calculation using hydro model and actual inflows or generation.

* + The difference between the two states (before and after efficiency improvements) determines the amount of renewable electricity available for that specific calendar year.
	+ Requires an annual model run to determine amount of electricity that would have been produced without the improvements in each year.
	+ Renewable electricity quantity is expected to vary significantly from year to year depending on variable inflow conditions and duration.

Method 2: One-time calculation of renewable electricity *percentage* using an historical period of inflow or generation.

* + Historical inflow or generation based on minimum of 5 years, for the entire available inflow record or generation, as determined by the utility.
	+ Electricity output in each state (before and after improvements) is calculated using a hydro model for all flow conditions.
	+ The difference between the two states, as an average efficiency percentage, is then applied to the actual generation in all future years to determine the eligible renewable resource electricity in each year.
	+ Renewable electricity quantity will vary from year to year depending on inflow duration and conditions but will be a straight percentage based on actual generation each year.

Method 3: One-time calculation of renewable electricity using an historical period of inflow or generation.[[29]](#footnote-29)

* + Historical inflow or generation based on minimum of 5-years for the entire available inflow record or generation, as determined by the utility.
	+ Electricity output in each state is calculated using a hydro model for all flow conditions and an annual average incremental hydroelectric generation value is calculated.
	+ The average difference between the two states, in megawatt-hours, is then used for all future years as the available renewable electricity regardless of actual generation.

Regardless of method chosen, the RPS Workgroup agreed that a utility or Commission Staff may request to update the model after five years or more of actual operation, for all projects completed after December 31, 2008. Actual generation results can vary from modeling. For recent efficiency upgrades, a five-year or longer period of actual operation should generate sufficiently broad and repeatable operating conditions to model the actual results of the efficiency upgrade. Where actual performance data differs from the modeling, the incremental renewable energy would be adjusted to reflect the actual results of the future efficiency averages in place of the modeling. Where study suggests a modification of renewable electricity quantities, such renewable electricity quantities shall be adjusted for future years, but changes will not be retroactive into the past.

**Discussion of Incremental Hydro Models**

Incremental hydro generation resulting from efficiency gains from hydropower upgrades was calculated by PacifiCorp using Method 2 and by Avista using Method 3. PSE is not claiming incremental hydro generation for 2012.

Although these methods provide the general guidelines by which the companies may model their incremental hydro generation, they do not provide specific rules to which the models must conform. As a result, both Avista and PacifiCorp have developed incremental hydro models according to company-generated model assumptions and parameters. Although each company has developed incremental hydro models that conform to the general guidelines described by one of the three methods from the RPS Workgroup, Staff believes that some of the assumptions and parameters employed by Avista and PacifiCorp may not be appropriate. Specific examples include:

* PacifiCorp disallows negative efficiency gains in its model. In other words, under certain conditions, turbine power curves suggest that the pre-upgrade facility is *more* efficient than the post-upgrade facility, but the Company excludes these efficiency losses from the calculation of incremental hydro gain.
* Avista does not appear to have controlled for changes in turbine capacity or for flow-through in cubic feet per second (cfs) in its models. This is concerning to Staff because an increase in turbine capacity does not necessarily correlate 100 percent with efficiency gains, given that higher flow rates may be required to achieve the larger output of a higher-capacity turbine. It is unclear whether such increases in flow rates might be an impermissible new water diversion under RCW 19.285.030(10)(b).[[30]](#footnote-30) The reported incremental gain should be derived from the *efficiency* improvements of hydro facilities at various points along the x-axis (cfs) of the turbine power curve and applied to the typical operational conditions of the respective facility. Such methods would isolate the incremental gain specifically attributable to efficiency improvements.[[31]](#footnote-31)

The above examples do not represent an exhaustive list of Staff’s concerns with the methodologies employed by Avista and PacifiCorp but, rather, point to a need for higher-resolution scrutiny of the detail contained within each company’s incremental hydro models, including company-subjected model constraints and assumptions. Staff was unable to complete an in-depth review of each company’s hydro models within the time available, and recommends more time be granted for a more thorough analysis of the incremental hydro models and calculation methodologies. Further, Staff feels that these issues indicate a need for more specific guidelines for incremental hydro calculations. Accordingly, Staff recommends more time be granted for the development of these specific guidelines which, themselves, rely in part upon a more detailed analysis of the models and the identification of points at which the model is allowed to be inappropriately flexible. Staff recommends that a regional workgroup be convened to help develop specific guidelines for calculating incremental hydro guidelines, subject to formal approval by the Commission.

In considering whether to grant Staff additional time for scrutiny of the incremental hydro models, the Commission should be aware that a final conclusion cannot be made regarding PacifiCorp’s compliance until after December 31, 2012, given that incremental hydro Method 2 requires actual 2012 flow data for the calculation of 2012 incremental hydro generation. Because it is unlikely that a final determination on PacifiCorp’s 2012 renewable compliance can be made before 2013, Staff recommends that the Commission wait until 2013 before making a final decision on the merits of the details of the incremental hydro calculation methodologies. In the interim, Staff will work with the companies and interested parties to perform a detailed analysis of the incremental hydro models and draft stricter guidelines for each calculation methodology. Because the Commission has not yet formally adopted a specific methodology for the calculation of incremental hydro generation, Staff would like additional time to comment on the benefits and drawbacks of each model and recommend that the Commission formally adopt a specific methodology or methodologies. Such comments and recommendation would require a thorough examination of each model and a statistical comparison of the accuracy of each model and methodology in representing reality over a to-be-defined time period.

PacifiCorp has submitted incremental hydro reports utilizing Method 2 to other states in the Pacific Northwest. In Oregon, that state’s Department of Energy is responsible for reviewing PacifiCorp’s incremental hydro model and incremental generation calculation methodology. Commission Staff would like an opportunity to work with the Oregon Department of Energy to vet PacifiCorp’s model thoroughly, and to develop recommendations for the adoption of additional, if not stricter, guidelines for Method 2. Because the Oregon Department of Energy has not completed its analysis of PacifiCorp’s report, the results of its analysis cannot be incorporated into these Staff Comments. Staff feels that it would be worthwhile to postpone a decision on incremental hydro generation reports so that Staff may work collaboratively with the Oregon Department of Energy. Because this higher level of scrutiny is being applied to PacifiCorp and to Method 2, Staff recommends additional time be granted to apply a higher level of scrutiny to the other companies and the other two methods for calculating incremental hydro generation.

# Data Requests

On May 22, 2012, the companies were asked to include detailed analysis and relevant data in attachments.[[32]](#footnote-32) This request was intended to assist companies in substantiating their compliance, allow Staff time to review incremental hydro models and avoid data requests. Specifically, the companies were asked to include the following information in their RPS reports:

* Applicable renewable contracts (include a copy of the contract as an attachment or, if the contract was filed in a prior Docket, the docket number and contract identification).
* Modeling and data references. For instance if a historic hydro model is used to demonstrate compliance and this model or associated data and analysis was filed with the Commission in a prior docket, include the docket number, date submitted, and document reference description.
* Supporting “Access” database.
* Excel spreadsheets that include analysis with formulas intact such as flow and generation for incremental hydro, and energy production data for biomass and wind.
* WREGIS numbers for RECs to be retired.
* A table of Contents.

Additionally, companies were asked to provide on or before June 1, 2012, information on their “compliance position” in regard to renewable energy; projected load; the percentage of RECs the company intends to hold in reserve “above” the percentage required to meet the load, the percentage calculation and how the percentage was derived.

None of the companies was able to provide the WREGIS numbers because the Department of Commerce has not determined Washington eligibility for any RECs.[[33]](#footnote-33)

The companies were repeatedly encouraged to submit their RPS reports early, to provide time for Staff to work with each company to ensure the report included the necessary information and to review incremental hydro models as necessary. Only Avista submitted early, leading Staff to send substantial data requests to PSE and PacifiCorp. PSE responded in a timely manner to the data requests and provided sufficient information, and also filed revised pages to its RPS report in response to Staff request. PacifiCorp failed to send the requested information about the incremental hydro models to Staff in time for that information to be incorporated into these comments.

# UE-120802 PUGET SOUND ENERGY

Staff believes the materials submitted with PSE’s June 1, 2012 RPS Report and additional documentation comply with reporting requirements under RCW 19.285.070 and WAC 480-109-040 and demonstrate that PSE is on track to meet its 2012 RPS target of using eligible renewable resources and RECs to supply at least three percent of the company’s Washington load.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2010** | **2011** | **2012** |
| **Washington Retail Load (MWh)** | 20,901,139 | 21,496,074 |  |
| **Target Load (MWh)** |  |  | 21,198,607 |
| **RCW 19.285 Requirement** | 0% | 0% | 3% |
| **Requirement (MWh)** | 0 | 0 | 635,958 |

PSE’s average annual load for its Washington State customers for 2010-2011 was 21,198,607 megawatt-hours. The company’s 2012 Renewable energy target is 635,958 megawatt-hours. The company’s initial RPS report did not include data for the amount of renewable energy generated from its facilities. The reason for this is that PSE does not wish to divulge sensitive information that could adversely affect its market position. Upon request, PSE submitted additional information to Staff on July 6, 2012, which showed that its facilities generated 1,166,224 megawatt-hours in 2011, identified by facility. PSE also provided additional information on the generation capacity of PSE’s eligible renewable resources with testimony it filed in the 2011 PSE General Rate Case.[[34]](#footnote-34)

PSE converted all of its 2011 renewable generation to RECs and sold them to other entities, and is not using them for its own 2012 compliance. The company intends to wait to retire RECs for 2012 compliance until after it has filed the 2013 or 2014 annual reports. PSE does not expect to use any alternative compliance mechanisms or incremental efficiency improvements at hydroelectric facilities to meet its 2012 renewable target.

Staff visited PSE on July 3, 2012, to view the company’s WREGIS account, which includes the number of megawatt-hours and RECs generated from PSE’s eligible facilities through March 2012. There is a three-month lag between electricity generation and availability of RECs in WREGIS, so this was the most current data available. PSE has been using WREGIS to register and trade RECs since 2008. Although the RECs have not been recognized by WREGIS as eligible for Washington compliance yet, the eligible renewable generating facilities are registered in the system and PSE appears to be properly documenting the renewable generation from those facilities. The volume of RECs registered in WREGIS for the first three months of 2012 is consistent with multiple communications from PSE to the Commission, outlined in the RPS report, that PSE is “on track to meet the Renewable Energy Target requirement for the (current) year 2012.”

Based on Staff’s viewing of PSE’s WREGIS account and the data provided on July 6, 2012, and filed on July 12, 2012, Staff is confident that PSE is on track to meet the 2012 RPS target.

**Reporting Requirements**

Staff believes PSE’s initial RPS report did not meet the requirements of RCW 19.285.070, WAC 480‑109‑40, and the May 22, 2012 Staff information request filed under Docket UE‑110523.[[35]](#footnote-35) Because PSE is not requesting a determination of compliance with the 2012 target in this report, Staff believes the supplemental information provided to Staff on July 6, 2012, and filed on July 12, 2012, contains the information required by the statute and rule at this time. When the company files for compliance determination, it will need to provide the vintage, location, WREGIS identification and other such information required for the RECs to be retired for 2012 compliance. Staff strongly encourages PSE to include data on all qualifying renewable generation to date in future RPS reports, to provide the Commission with complete information on target year progress. Following final action by the Commission on this report, the company must send a summary of the report to customers within 90 days.[[36]](#footnote-36)

# UE-120791 AVISTA CORPORATION

Staff believes the materials submitted with Avista’s June 1, 2012 RPS Report comply with reporting requirements under RCW 19.285.070 and WAC 480-109-040, and demonstrate that Avista is on track to meet its 2012 RPS target of using eligible renewable resources and RECs to supply at least three percent of the company’s Washington load.

Avista plans to meet 100 percent of its RPS target using qualified hydroelectric upgrades. Staff needs additional time to understand and evaluate the model used by the company to determine incremental hydroelectric generation. Until the model is reviewed, Staff cannot determine whether Avista is on track to meet the target.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2010** | **2011** | **2012** |
| **Washington Retail Load (MWh)** | 5,467,176 | 5,602,601 |  |
| **Target Load (MWh)** |  |  | 5,534,889 |
| **RCW 19.285 Requirement** | 0% | 0% | 3% |
| **Requirement (MWh)** | 0 | 0 | 166,047 |

Avista’s average retail load for 2010-2011 is 5,534,889 megawatt-hours, which results in a 2012 renewable target of 166,047 megawatt-hours. Based on estimates provided in the RPS Report, the company anticipates generating a total of 215,654 megawatt-hours of eligible renewable resources.

Generation will result mainly from qualified hydroelectric upgrades to Company-owned facilities located on the Spokane and Clark Fork Rivers. Additional hydroelectric resources also include upgrades completed by Grant County Public Utility District (PUD) at Wanapum Dam on the Columbia River.[[37]](#footnote-37) Through existing power sales purchases with the PUD, Avista receives credit for just under four percent of the incremental energy produced as part of these upgrades. A small segment of the renewable portfolio for 2012 will be wind generation. This generation will result from the Palouse Wind Power Project, which is currently under construction. Company information indicates that this facility will begin production late in 2012.

The table below details qualifying hydroelectric upgrade generation expected in 2012 and qualifying wind generation for the Company’s 2012 compliance period.

|  |  |  |
| --- | --- | --- |
| **Renewable Generation Resource** | **2012** | **Percentage of Total Portfolio** |
| Water (Qualified Hydroelectric Upgrades) | 180,681 MWh | 84% |
| Wind | 34,973 MWh | 16% |
| **Total** | **215,654 MWh** | **100%** |

Avista anticipates a surplus of 49,607 megawatt-hours above the 2012 compliance target. However, qualified hydroelectric upgrades must be used for compliance in the year in which they are generated, whereas the RECs from wind generation may be applied toward the 2013 compliance target.[[38]](#footnote-38)

Avista does not plan to use any RECs as part of its compliance in 2012. In 2008, the Company established a contract to purchase 50,000 RECs per year from the Stateline Wind Project for the 2012 through 2015 compliance period to comply with RCW 19.285 requirements. However, these RECs were sold because they were determined to be in excess of the Company’s needs in 2011 due to the acquisition of the Palouse Wind Power Purchase Agreement and decisions concerning the need for reserves for qualifying hydroelectric upgrades. Avista has an existing contract to purchase RECs from the Stateline Wind Project after 2015 to be used for 2016 RPS obligations, which increases from 3% to 9% of the Company’s total anticipated Washington state retail load for that year.

Based on the information provided, Staff concludes that Avista may be on track to meet its renewable targets for 2012. However, for the reasons described in Section 5 of these Comments, further information regarding the model used to calculate incremental hydroelectric generation will need to be reviewed. A final determination can then be made following the completion of the 2012 compliance period.

**Reporting Requirements**

Because Avista is not requesting a determination of compliance with the 2012 target in this report, Staff believes Avista has met its reporting requirements at this time pursuant to RCW 19.285.070, WAC 480‑109‑40, and the May 22, 2012 Staff information request filed under Docket UE‑110523. Avista used a reporting template developed by the Department of Commerce to submit renewable energy information to that agency, as required by RCW 19.285.070(1) and WAC 480‑109‑040(1). Following final action by the Commission on Avista’s report, the company must provide a summary of the report to customers within 90 days.[[39]](#footnote-39)

# UE-120813 PACIFICORP

Staff believes the materials submitted with PacifiCorp’s June 1, 2012 RPS Report comply with reporting requirements under RCW 19.285.070 and WAC 480‑109‑40 and demonstrate that PacifiCorp is on track to meet its 2012 RPS target of using eligible renewable resources and RECs to supply at least three percent of the company’s Washington load.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **2010** | **2011** | **2012** |
| **Washington Retail Load (MWh)** | 3,984,631 | 4,005,863 |  |
| **Target Load (MWh)** |  |  | 3,995,427 |
| **RCW 19.285 Requirement** | 0% | 0% | 3% |
| **Requirement (MWh)** | 0 | 0 | 119,857 |

PacifiCorp reports an average annual load for its Washington State customers for 2010-2011 of 3,995,247 megawatt-hours. The company’s 2012 Renewable energy target is 119,857 megawatt-hours. PacifiCorp has sufficiently demonstrated that it is able to achieve this target with a combination of RECs from company-owned resources, unbundled REC purchases, and incremental generation from eligible hydroelectric facility upgrades. The Company is claiming a Washington-allocated volume of 117,716 megawatt-hours from wind-generated RECs and 2,141 megawatt-hours from qualifying incremental hydroelectric generation (pg. 6). Incremental generation from qualifying hydroelectric facilities has been provided in the company’s report as a forward-looking model estimate and, as a consequence, cannot be verified until on or after December 31, 2012, when actual 2012 hydro facility generation data become complete. However, given that incremental hydro generation represents less than 2 percent of the Company’s claimed 2012 qualifying renewable volume, hydro generation forecasting errors are highly unlikely to influence Staff’s conclusion that PacifiCorp is on track to meet its target.

**Incremental Hydro Interaction with REC Retirements**

In contrast to incremental hydro’s marginal contribution to the fulfillment of the Company’s 2012 requirements, hydro generation forecasting errors are highly relevant to the overall conversation due to the fact that they will influence the number of RECs that should be retired for compliance with 2012 renewable requirements. Incremental hydro generation does not produce RECs and may be used only to fulfill renewable requirements in the year in which the incremental electricity is generated.[[40]](#footnote-40) Consequently, incremental hydro generation in 2012 must be used in 2012. Therefore, pre-2013 retirement of RECs for compliance with the Company’s 2012 renewable requirement for Washington is not recommended; some RECs may be unnecessarily retired and doing so would add costs to the Company’s compliance with renewable resource acquisition requirements which could then, in turn, be passed onto Washington ratepayers. For example, if PacifiCorp underestimated the 2012 volume of incremental hydro generation and the actual volume turns out to be greater than 2,141 megawatt-hours, it follows that fewer than the 117,716 RECs the company has set aside for 2012 compliance would need to be retired. The number of RECs that *should* be retired cannot be known until actual 2012 incremental hydro generation is known. Therefore, Staff recommends that REC retirement for 2012 compliance is delayed until the Commission issues final determination of 2012 compliance.

**Incremental Hydro Models**

In its June 1, 2012 filing, PacifiCorp included a compact disc containing CONFIDENTIAL spreadsheets wherein the Company presented its models for calculating incremental hydro generation resulting from facility efficiency improvements. Although any deviation of actual 2012 hydro production from 2012 estimates is very unlikely to influence Staff’s conclusion that PacifiCorp is expected to meet its 2012 renewable target (as described in the previous section), it is still necessary that Staff scrutinize the model underlying these calculations to ensure that it has been properly constructed. In legitimizing the reported level of incremental hydro generation, Staff would be in effect legitimizing the model inputs, assumptions and parameters upon which the annual incremental generation calculations are based. We are establishing, through the investigation of the information associated with this 2012 report, a foundation for future calculations of qualifying incremental hydro generation. Staff does not feel that the models can be adequately evaluated within the time available. Staff recommends that additional time be granted for proper scrutiny of the incremental hydro models.

**Reporting Requirements**

Because PacifiCorp is not requesting a determination of compliance with the 2012 target in this report, PacifiCorp appears to have met its reporting requirements at this time pursuant to RCW 19.285.070, WAC 480-109-40, and the May 22, 2012 Staff information request filed under Docket UE-110523. Following final action by the Commission on this report, the company must send a summary of the report to customers within 90 days.[[41]](#footnote-41)

PacifiCorp used a reporting template developed by the Department of Commerce to submit renewable energy information to that agency, as required by RCW 19.285.070(1) and WAC 480‑109‑040(1).

# Interested Parties’ Response

Staff contacted interested parties from Public Counsel, Northwest Energy Coalition (NWEC), Renewable Northwest Project, the Energy Project and the Oregon Department of Energy. NWEC raised a concern that Avista generated renewable energy from Noxon Rapids 2 for only part of 2011 but capitalized the cost over an entire year, thus affecting the revenue requirement and the amount the company intends to collect from ratepayers. Companies may be considered in compliance with the law if they invest four percent of the total annual retail revenue requirement in the incremental costs of eligible renewable resources or RECs.[[42]](#footnote-42) Avista is currently significantly below the four percent revenue requirement, but this issue might affect the amount of renewable resources the company must acquire in the future.

NWEC shared Staff’s concern that all three companies use market prices for comparison with renewable energy in incremental cost calculations (discussed below).

On July 10, 2012, Staff consulted with Oregon Department of Energy (ODOE) regarding incremental hydro calculation issues and REC issues relevant to both agencies. ODOE has consulted with the US Army Corps of Engineers (ACE) to assist in evaluating hydro models proposed by regulated companies in Oregon. ACE hydrologists with specific expertise in modeling have been reviewing hydro models proposed by utilities in Oregon. ODOE echoed concerns with aspects of the Washington models that are already being considered by Staff. ODOE also raised the concern that incremental hydro resources may be double counted between Washington and Oregon by PacifiCorp and Avista, because incremental hydro does not generate RECs eligible for use in Washington, but RECs may be used to meet Oregon or other states’ requirements. Staff requests additional time to investigate this issue.

# Issues for Broader Consideration

**Initial RPS Target Year**

The statute and the rules clearly establish the first target date for complying with the RPS requirements in the EIA as January 1, 2012.[[43]](#footnote-43) Elsewhere in the rules, the target is referred to as the “annual renewable resource requirement.”[[44]](#footnote-44) Further, WAC 480‑109‑020(1)(a) specifies that the target must be met for the remainder of the year. This establishes that the renewable resource requirement must be met for the entire target year, not just on January 1 of the target year.

A source of confusion on defining the first target year comes from paragraph 33 in General Order R‑546, adopting WAC 480-109.[[45]](#footnote-45) In that Order, the Commission stated:

The statute requires, and the rules provide, that by January 1, 2012, a utility must demonstrate that three percent of its average load for 2010 and 2011 was either produced by renewable resources during 2011, and/or RECs acquired by January 1, 2012. The rule provision that RECs may represent megawatt-hours generated in 2010, 2011, or 2012 is consistent with the statute.

This seems to suggest that the Commission interpreted 2011 to be the first target year. RCW 19.285.040(1)(a) is the only place where the first target year is specified; thereafter the statute simply refers to “the target year.” Nowhere in the statute or rule is a 2011 target mentioned. The statute states that utilities must use eligible renewable resources or acquire RECs to meet the annual targets by January 1, 2012. The rules adopted by the Department of Commerce explicitly require utilities to own the eligible renewable resources, have contracts for renewable resources or have contracts for RECs no later than January 1 of the target year,[[46]](#footnote-46) which is defined as 2012 in WAC 194‑37‑110(1)(b). Resources acquired by January 1, 2012, may also produce RECs during the remainder of the target year and the subsequent year to meet the annual target.[[47]](#footnote-47)

Further, WAC 480-109-040(1)(d) states “The [June 1, 2012] report must describe the steps the utility is taking to meet the renewable resource requirements for the current year.” This statement indicates that 2012 is the first target year, because it is also the first reporting year, and reporting must be done on meeting the target for the current year.

However, the Commission stated in paragraph 38 of Order R‑546 adopting WAC 480-109:

The rule [WAC 480‑109‑040(1)(d)] is sufficiently clear that in the first report submitted on June 1, 2012, a utility must demonstrate that it complied with the requirements of WAC 480‑109‑020 and describe its progress towards meeting the January 1, 2013, renewable target.

That the utilities are reporting on compliance with the requirements of WAC 480-109-020 on June 1, 2012, implies that that 2012 is the first compliance year, and that the information provided on progress toward meeting the 2013 renewable target is not intended for compliance purposes at that time. It appears that between paragraph 33 and paragraph 38, General Order R‑546 is internally inconsistent in its implicit determination of the target year.

Paragraph 33 of General Order R-546 is the only reference to a 2011 initial target year that Staff was able to find in the statute, the rules adopted by the Commission and Commerce, or the recommendations of RPS Working Group. Based on this body of work, Staff interprets the statute and rule to set the initial RPS target year for the EIA as 2012.

Turning to reporting, the utilities may use RECs generated during the target year and subsequent year,[[48]](#footnote-48) which means it is unlikely that the reports will be able to indicate whether the company is in compliance for that year. Rather the RPS reports can provide current year progress and renewable acquisition for prior year compliance. Compliance for any given year might not be determined until subsequent years. For example, a company could hold 2012 and 2013 RECs in reserve for 2012 compliance and not decide how many 2013 RECs to use until the 2014 compliance year (see Appendix B). As recommended by the report from the RPS Workgroup, Staff supports setting a timeline for determining final compliance no later than June 1 two years after a given compliance year (e.g. provide final determination by June 1, 2014 for the 2012 compliance year). Establishing a two-year timeline for final compliance determination would prevent a backlog of unapproved compliance filings.

**REC Acquisition Timeline**

In addition to confusion around the initial target year, there is also a lack of clarity surrounding when renewable resources and/or RECs must be acquired. Unless converted to RECs, megawatt-hours from eligible renewable resources must be used for target year compliance in the year in which they were generated.[[49]](#footnote-49) However, the only eligible renewable resource that cannot produce RECs is a generation facility that is powered by fresh water.[[50]](#footnote-50) All other eligible renewable resources may be converted to RECs.

RCW 19.285.040(2)(e) states that RECs from the target year, the preceding year and the subsequent year may be used to comply with the target.[[51]](#footnote-51) WAC 480-109-020(2) states “Renewable energy credits produced during the target year, the preceding year or the subsequent year may be used to comply with this annual renewable resource requirement provided that they were *acquired by January 1 of the target year*” (emphasis added).

General Order R-546, paragraph 33 also states:

The statute requires, and the rules provide, that by January 1, 2012, a utility must demonstrate that three percent of its average load for 2010 and 2011 was either produced by renewable resources during 2011, and/or RECs acquired by January 1, 2012.

RECs are produced only when electricity from renewable resources is generated; RECs cannot be produced in advance. Therefore, if companies are to be able to use RECs produced in the target year and subsequent year, they cannot be acquired by January 1 of the target year. The rules for reporting requirements should be consistent with the constraints of the REC market.

Rules adopted by the Department of Commerce address this issue by requiring utilities to acquire the resources or contracts for the RECs, rather than the actual RECs themselves, by January 1 of the target year.[[52]](#footnote-52) Utilities can then apply the RECs produced during the target year toward the target.

Staff believes there are substantially different interpretations of the statute in the Commission’s order adopting the rules and the plain language of the rules adopted by the Commission and the Department of Commerce. In 2012, the Washington Legislature amended RCW Chapter 19.285 to alter the extent to which biomass energy qualifies as an eligible renewable resource.[[53]](#footnote-53) Because of the legislative amendments, some of the rules in WAC 480-109 are no longer consistent with the statute. For both of those reasons, Staff recommends that the Commission initiate a rule making process to update WAC 480-109.

**Incremental Cost Calculations**

Each of the companies is required to report on the “type and cost of the least-cost substitute resources available to the utility that do not qualify as eligible renewable resources.”[[54]](#footnote-54) A company may be considered in compliance with the EIA if it has invested four percent of its total annual retail revenue requirement on the incremental costs of eligible renewable resources, the cost of RECs, or both. Although none of the three investor-owned utilities intends to use this alternative means of compliance for 2012, the way they calculate incremental cost may become important in future years.

As defined in RCW 19.285.050(1)(b):

The incremental cost of an eligible renewable resource is calculated as the difference between the levelized delivered cost of the eligible renewable resource, regardless of the ownership, compared to the levelized delivered cost of an equivalent amount of reasonably available substitute resources that do not qualify as eligible resources, where the resources being compared have the same contract length or facility life.

Instead of comparing renewable resources to resources with the same contract length or facility life, all three companies used market prices to calculate incremental cost. PSE used the cost of short-term market purchases for the energy component and the cost of a peaker unit for the capacity component, and Avista used the 2011 Mid-Columbia wholesale electric market power prices as the available substitute resource. PacifiCorp also used Mid-Columbia wholesale prices for comparing the cost of incremental hydro. Because acquisition of renewable energy from hydroelectric efficiency upgrades does not require building new facilities, however, Staff has less concern with PacifiCorp’s use of market prices as the available substitute resource.

In general, Staff does not consider market prices of wholesale power as equivalent in contract length or facility life with investment in renewable resources, and they should not be used for incremental cost comparisons.

Staff also has concerns with the way PacifiCorp treats the negative incremental cost of incremental hydroelectric resources. Staff believes that PacifiCorp should report the negative incremental cost instead of reporting it as zero, so that this information can appropriately inform ratemaking procedures.

**WREGIS and REC Retirement**

Until a Washington WREGIS administrator determines the eligibility of RECs for meeting Washington compliance standards, the Commission may be unable to make final compliance determinations and utilities may be unable to retire RECs for any compliance year. Likewise, the State Auditor will be unable to determine compliance of the consumer-owned utilities in meeting their renewable acquisition targets. Staff would like to reiterate that it is in the public interest for the Department of Commerce to develop its WREGIS capacity as soon as possible, and preferably before the end of 2012.

**Other Issues**

There may be additional issues that Staff has missed in the review of the RPS reports, or additional information that may become available after these comments are submitted that may prompt Staff to update the recommendations.

# Staff Position

Staff recommends that the Commission approve the reports from all three companies as having met the reporting requirements in RCW 19.285 and WAC 480‑109.

Staff recommends that the Commission defer final determination of 2012 compliance. In order to maintain a consistent timeline, Staff recommends that the Commission require companies to file for final compliance determination no later than June 1 two years after the target year, or June 1, 2014, for the 2012 target year. However, companies may request a compliance determination at any time before that deadline.

Additionally Staff request that the Commission defer issuing final compliance determinations until:

* WREGIS identification is provided for the specific RECs to be retired for 2012 compliance.
* Commission Staff review incremental hydroelectric models and the Commission issues formal approval of one or more models.
* Actual generation has occurred for incremental hydroelectric resources to be used for 2012 compliance, if company uses models #1 or 2.

Staff recommends that the Commission set a 30-day deadline for companies to retire RECs following final determination of compliance.

Staff recommends that the Commission host additional workshops as necessary through the Renewable Portfolio Standards Working Group (UE-110523) to evaluate incremental hydro methodologies for formal approval by the Commission. In support of that evaluation, Staff will consult with the United States Army Corps of Engineers to evaluate the models being used by Washington companies.

Staff recommends the Commission open a rulemaking proceeding to update WAC 480-109 as discussed in Section 11 of these Comments.

**Appendix A: Summary table of the legal requirements**

Below is a checklist of the required contents of the investor-owned utilities’ reports:

| **RCW 19.285** | **WAC 480-109** |  | **Avista** | **PSE** | **PacifiCorp** |
| --- | --- | --- | --- | --- | --- |
| For each year that a qualifying utility elects to demonstrate alternative compliance under RCW [19.285.040](http://apps.leg.wa.gov/rcw/default.aspx?cite=19.285.040)(2) (d) or (i) or [19.285.050](http://apps.leg.wa.gov/rcw/default.aspx?cite=19.285.050)(1), it must include in its annual report relevant data to demonstrate that it met the criteria in that section. | The report must state if the utility is relying upon one of the alternative compliance mechanisms provided in WAC [480-109-030](http://apps.leg.wa.gov/wac/default.aspx?cite=480-109-030) instead of meeting its renewable resource target. A utility using an alternative compliance mechanism must include sufficient data, documentation and other information in its report to demonstrate that it qualifies to use that alternative mechanism. | **Alternative Compliance** | N/A | N/A | N/A |
| the utility’s annual load for the prior two years | the utility’s annual load for the prior two years | **Annual Load For Previous Two Years** | Yes | Yes | Yes |
| the amount of megawatt-hours needed to meet the annual renewable energy target | the total number of megawatt-hours from eligible renewable resources and/or renewable resource credits the utility needed to meet its annual renewable energy target by January 1 of the target year | **Renewable Energy Target** | Yes | Yes | Yes |
| the amount of megawatt-hours of each type of eligible renewable resource acquired, the type and amount of renewable energy credits acquired | the amount (in megawatt-hours) and cost of each type of eligible renewable resource used | **Renewable Energy Acquired To Have Met Renewable Energy Target** | Yes | Yes | Yes |
| The percent of its total annual retail revenue requirement invested in the incremental cost of eligible renewable resources and the cost of renewable energy credits. | the type and cost (per megawatt-hour) of the least-cost substitute resources available to the utility that do not qualify as eligible renewable resources, the incremental cost of eligible renewable resources and renewable energy credits, and the ratio of this investment relative to the utility's total annual retail revenue requirement. | **Incremental Cost Compared To Annual Retail Revenue Requirement** | Yes | Yes | Yes |
|  | The report must describe the steps the utility is taking to meet the renewable resource requirements for the current year. This description should indicate whether the utility plans to use or acquire its own renewable resources, plans to or has acquired contracted renewable resources, or plans to use an alternative compliance mechanism. | **Current Year Progress** | Yes | Yes | Yes |

**Appendix B: Timeline for Renewable Energy Percentages 2012-2020 (UE-110523)**

|  |  |
| --- | --- |
| **2010 & 2011** **Two year average load for 2012** | **Note: Target Year reference is compliance year. Language from law.****The focus of the chart is to demonstrate 2012 compliance timeframe.** **Future years have similar parallel construction.** |

|  |
| --- |
| **Target Load %: *WAC 480-108-020 (1) (a)* Eligible Renewable Resources (ERR)** |
|  |  | **3%** | **3%** | **3%** | **3%** | **9%** | **9%** | **9%** | **9%** | **15%** |
| **2010** | **2011** | **2012** | **2013** | **2014** | **2015** | **2016** | **2017** | **2018** | **2019** | **2020** |
|  |  | Current to 6/1/2012 REC “Preapproval.”*UE100849 para 70 on 12/30/10*  |  |  |  |  |  |  |  |  |
|  |  | **1/1/2012**Utility owned or acquired RECs for 2012 compliance.*WAC 480-109-020 (1) and (2)* | **1/1/2013**Utility owned or acquired RECs for 2013 “Target Year”-based on average load for 2011 and 2012. | **1/1/2014**Utility owned or acquired RECs for 2014 “Target Year” based on average load for 2012 and 2013. |  |  |  |  |  |  |
|  |  | **6/1/2012**Utility Report on compliance status for 2012 *WAC 480-109-040 (1)* | **6/1/2013**Report on Compliance Status for 2012 and 2013. | **6/1/2014**Report on 2012 final, 2013 status, and 2014 status. |  |  |  |  |  |  |
|  |  | **7/1/2012**Interested parties and Staff comments on utility reports.*WAC 480-109-040 (2)* | **7/1/2013**Interested parties and Staff comments. | **7/1/2014**Interested parties and Staff comments. |  |  |  |  |  |  |
|  |  | **Commission Determination** of full or partial compliance for 2012. | **Commission Determination** of full or partial compliance for 2012 and 2013. | **Commission Determination** final compliance for 2012 and full or partial compliance for 2013 and 2014. **Penalty** potential for 2012. |  |  |  |  |  |  |

1. Appendix A summarizes the legal requirements for the companies’ reports. [↑](#footnote-ref-1)
2. Appendix B provides a timeline for annual compliance reporting and Commission action. [↑](#footnote-ref-2)
3. North Carolina State University maintains an online Database of State Incentives for Renewables and Efficiency (DSIRE), <http://www.dsireusa.org/>. [↑](#footnote-ref-3)
4. RCW 19.285.030(18). [↑](#footnote-ref-4)
5. RCW 19.285.030(10). [↑](#footnote-ref-5)
6. RCW 19.285.040(2)(b); RCW 19.285.040(2)(h). Resources may qualify for multiplier credits if a facility counts as distributed generation or uses approved apprenticeship programs. [↑](#footnote-ref-6)
7. *See* RCW 19.285.030(10). The Oregon RPS statute treats hydroelectric energy differently. *See* ORS 469A.020; ORS 469A.025(4), (5) (available at <http://www.leg.state.or.us/ors/469a.html>). [↑](#footnote-ref-7)
8. *See In re Puget Sound Energy, Inc.*, Docket UE‑070725, Final Order Granting in Part, & Denying in Part, Amended Petition; Determining Appropriate Accounting and Use of Net Proceeds from the Sales of Renewable Energy Credits & Carbon Financial Instruments ¶¶ 13-17 (Wash. Utils. & Transp. Comm’n May 20, 2010). [↑](#footnote-ref-8)
9. The Washington Department of Commerce has selected the Western Renewable Energy Generation Information System as the renewable energy credit tracking system under RCW 19.285.030(17). WAC 194‑37‑040(31); WAC 194‑37‑210. The Western Renewable Energy Generation Information System has a website at <http://www.wregis.org/>. [↑](#footnote-ref-9)
10. *See* RCW 19.285.040(2)(e). [↑](#footnote-ref-10)
11. RCW 19.285.040(2)(a). [↑](#footnote-ref-11)
12. RCW 19.285.050(1). [↑](#footnote-ref-12)
13. RCW 19.285.040(2)(d). [↑](#footnote-ref-13)
14. RCW 19.285.040(2)(i). [↑](#footnote-ref-14)
15. RCW 19.285.070. [↑](#footnote-ref-15)
16. RCW 19.285.060(6). [↑](#footnote-ref-16)
17. RCW 19.285.060(7). [↑](#footnote-ref-17)
18. RCW 19.285.060(1). [↑](#footnote-ref-18)
19. RCW 19.285.080(1). [↑](#footnote-ref-19)
20. The Commission adopted its rules in Docket UE‑061895, General Order R‑546. The rule adoption order is published in issue 08‑1 of the Washington State Register as WSR 07‑24‑012. [↑](#footnote-ref-20)
21. WAC Chapter 194‑37. [↑](#footnote-ref-21)
22. *See* Docket UE‑111016, Policy Statement Regarding Processes for Determining Whether Projects are “Eligible Renewable Resources” under RCW 19.285 and WAC 480‑109 (June 7, 2011). [↑](#footnote-ref-22)
23. Docket UE-110523. [↑](#footnote-ref-23)
24. 2012 Wash. Laws ch. 254. [↑](#footnote-ref-24)
25. RCW 19.285.030(10)(b); *see* WAC 194‑37‑130 (Department of Commerce rule for consumer-owned utilities’ documentation of incremental hydropower). [↑](#footnote-ref-25)
26. *See* RCW 19.285.030(17). [↑](#footnote-ref-26)
27. Washington Department of Community, Trade, and Economic Development, *Concise Explanatory Statement, Chapter 194‑37 WAC (Energy Independence Act, RCW 19.285)* at 12 (March 2008); *see* WAC 197‑37‑130(3)(f). [↑](#footnote-ref-27)
28. According to the website of the Northwest Power and Conservation Council, <http://www.nwcouncil.org/energy/powersupply/dams/print.asp>, a “storage dam” is a “dam with a large reservoir that can hold water over the annual high-water season to the following low-water season.” “Run-of-the-river dams” are “hydroelectric dams without large reservoirs and, therefore, with only a limited capacity for water storage. This means they also have limited control of their outflow and power generation.” [↑](#footnote-ref-28)
29. WAC 194‑37‑130(2) requires consumer-owned utilities to “calculate renewable resource power from incremental hydropower as the increase in annual megawatt-hours of generation attributable to the qualified incremental hydropower efficiency improvements under average water generation.” WAC 197‑37‑130(3)(c) requires an explanation of “how the amount of generation in ‘average water generation’ was calculated.” Under WAC 194‑37‑040(3), “ʻaverage water generation’ means the average megawatt-hours of generation from a hydroelectric project over a period of ten consecutive years or more, taking into account differences in water flows from year to year.” [↑](#footnote-ref-29)
30. WAC 194‑37‑040(21), which applies to consumer-owned utilities, defines “qualified incremental hydropower efficiency improvements” as including “improvements to hydraulic conveyance systems that decrease head loss,” but as excluding “additions to capacity by increasing pondage or elevation head.” [↑](#footnote-ref-30)
31. WAC 194‑37‑130(3)(d) requires consumer-owned utilities to explain “What other factors may have caused an increase in electricity production and how the amount ‘attributable to the qualified improvements’ was extracted from the total increase.” [↑](#footnote-ref-31)
32. Docket UE-110523. [↑](#footnote-ref-32)
33. See Section 4 above, “Western Renewable Energy Generation Information System (WREGIS).” [↑](#footnote-ref-33)
34. *WUTC v. Puget Sound Energy, Inc.*, Dockets UE‑111048/UG‑111049, Exhibit No. \_\_ (DEM‑12C), Redacted First Exhibit (Confidential) to the Prefiled Rebuttal Testimony of David E. Mills (filed Jan. 17, 2012). [↑](#footnote-ref-34)
35. RCW 19.285.070 and WAC 480‑109‑040 require investor-owned utilities, on or before June 1, 2012, to file a report with the Department of Commerce as well as the Commission. On June 1, 2012, Puget Sound Energy provided the Department of Commerce with the same material that it filed with the Commission. [↑](#footnote-ref-35)
36. WAC-480-109-040(5). [↑](#footnote-ref-36)
37. The upgrade at Wanapum Dam is a structure designed to allow juvenile salmon and steelhead to pass the dam safely. The Federal Energy Regulatory Commission required Grant County PUD to install it as a condition of the Federal Power Act license for the Priest Rapids Project. *Wash. Dep’t of Fisheries v. PUD No. 2 of Grant Cnty.*, 109 FERC 62,216 (2004). [↑](#footnote-ref-37)
38. *See* RCW 19.285.030(17); RCW 19.285.040(1)(e); WAC 480‑109‑007(17); WAC 480‑109‑020(2). [↑](#footnote-ref-38)
39. WAC-480-109-040(5); *see* RCW 19.285.070(3). [↑](#footnote-ref-39)
40. See RCW 19.285.030(17); RCW 19.285.040(1)(e); WAC 480‑109‑007(17); WAC 480‑109‑020(2). [↑](#footnote-ref-40)
41. *See* WAC-480-109-040(5). [↑](#footnote-ref-41)
42. RCW 19.285.050(1)(a). [↑](#footnote-ref-42)
43. RCW 19.285.040(2)(a); WAC 480-109-020(1)(a). [↑](#footnote-ref-43)
44. WAC 480-109-020(2). [↑](#footnote-ref-44)
45. Docket UE‑061895, General Order R‑546 (Nov. 30, 2007). The text of the order is available on the Washington Code Reviser website at <http://apps.leg.wa.gov/documents/laws/wsr/2008/01/07-24-012.htm>. [↑](#footnote-ref-45)
46. WAC 194-37-110(1)(c). [↑](#footnote-ref-46)
47. RCW 19.285.040(2)(e). [↑](#footnote-ref-47)
48. RCW 19.285.040(2)(e); WAC 480‑109‑020(2). [↑](#footnote-ref-48)
49. *See* WAC 480-109-020(1). [↑](#footnote-ref-49)
50. RCW 19.285.030(17); WAC 480‑109‑007(17). [↑](#footnote-ref-50)
51. Docket UE-061895, General Order R-546. [↑](#footnote-ref-51)
52. WAC 194-37-110(1)(c). [↑](#footnote-ref-52)
53. 2012 Wash. Laws ch. 22. [↑](#footnote-ref-53)
54. WAC 480-109-040(1)(b); *see* WAC 480‑109‑030(1). WAC 194‑37‑190 governs consumer-owned utilities’ documentation of substitute resources and resource equivalence. [↑](#footnote-ref-54)