

## 4.0 Renewables Option of the Conservation Rate Credit

Criteria for Renewable Energy Resources Eligible for the Renewables Option (RO) of the Conservation Rate Credit

### 4.1 Purpose and Scope

The purpose of this section is to explain the procedures for implementing the RO.

Many of the new requirements included in this section exist because of the \$6 million dollar/year cap on claims against the RO. To ensure this \$6 million spending cap is not exceeded, claims against the RO will be pro rata reduced if they total more than \$6 million in any single year. Several new reporting restrictions have been put into place to help ensure the \$6 million is distributed fairly, that the objectives of the program are met (section 4.2), and that funds are channeled towards utilities with valid project/program needs.

### 4.2 Objectives of the Renewables Option

- To encourage the development of new incremental renewable energy facilities and activities in the Pacific Northwest, and
- To maximize the development of incremental renewable generation.

### 4.3 Definitions

- **Community Owned Renewable Projects:** Community owned means that more than one member of the local community has a significant direct financial stake in a small commercial-scale project (meeting the New Renewable Energy Facility definition) other than through land lease payments, tax revenues, or other payments in lieu of taxes. Small commercial-scale means all projects that are too large to qualify for net metering but less than 3-megawatt capacity (e.g., onsite home-sized projects are excluded and projects must be connected to the grid). Customers participating in such projects are eligible for an annual dollar for dollar rate credit for expenses associated with the project(s). As with other aspects of the RO, administrative costs are not eligible expenses. BPA will approve applications for a rate credit amount after the customer demonstrates to BPA's satisfaction that the proposed project meets this definition of a Community Owned Renewable Project.
- **Environmental Attributes** means the non-power attributes associated with the energy generated from a renewable energy facility. Environmental attributes are the fuel type, emissions, or other environmental characteristic of a renewable resource. Non-power attributes or environmental attributes do not include any energy, capacity, reliability, or other power attributes used to provide electricity services. Environmental or non-power attributes are expressed in megawatt-hours (MWh); one Environmental Attribute represents the non-power attributes made available by the generation of 1 MWh of energy from a Renewable

Energy Facility. Environmental Attributes are commonly referred to as "Renewable Energy Certificates" (RECs), "Green Tags," or "Tradable Renewable Certificates" (TRCs).

- **Environmentally Preferred Power (EPP):** One of BPA's renewable energy products for which BPA charges a Green Energy Premium. (WP-07-E-BPA-25)
- **Existing Renewable Energy Facility (Existing Facility)** is a Renewable Energy Facility that was energized prior to January 1, 2006, but after May 1, 1999.
- **Hybrid Facilities:** That fraction of a renewable energy facility that uses a Renewable Energy Fuel Source to generate electricity.
- **Incremental Renewable Energy Facilities and Activities:** Those activities and resources beyond that required by law. For example, in Oregon, the Investor-Owned Utilities System Benefit Charge is required by law; therefore, it is not incremental and is not eligible for the RO.
- **Integration Costs:** Costs of hour-to-hour storage and/or shaping of generation from non-dispatchable Renewable Energy Facilities. Integration costs do not include within hour ancillary services (imbalance and regulation costs) or transmission costs. Self-supplied storage and shaping is eligible, if costs are approved by BPA. BPA suggests self-supplied integration cost claims should be based on near-term opportunity costs. Certification by an independent CPA is required for approval.
- **Net Electric Energy** means the metered MWh generated and sold, and excludes electric energy used within the renewable energy facility to power equipment such as pumps, motors, controls, lighting, heating, cooling, and other systems needed to operate the facility.
- **New Renewable Energy Facility (New Facility)** is a Renewable Energy Facility that was energized after January 1, 2006. BPA will distinguish between new facilities and expansions of an existing facility on a case-by-case basis.
- **Pacific Northwest** has the meaning defined in section 3(14) of the Act, Public Law 96-501, 16 USC 839.
- **Project Costs:** Project Costs will be limited to independently CPA-certified contracted energy charges at the bus bar for the year in which the claim is being made and independently CPA-certified Integration Costs for the year in which the project's generation being claimed.  
$$\text{Project Costs} = [\text{Energy costs at the bus bar for the year in which the claim is being made} + \text{integration costs for the year in which the claim is being made}]$$
- **Proxy for Avoided Cost:** The simple average of BPA's FY 2007 flat Priority Firm (PF) preference rate and the 2007 forward flat-block Mid-C market price used in the investor-owned utility residential exchange settlement. The 2007 forward flat block Mid-C market price used in the

residential exchange settlement is equal to \$58.46/MWh and the FY 2007-2009 flat PF preference rate is equal to \$25.87/MWh, resulting in a Proxy for Avoided cost of \$42.17/MWh.

- **Renewable Energy Certificates (RECs):** See Environmental Attributes.
- **Renewable Energy Facility** means a single module or unit, or an aggregation of such units, which generates electric energy that is independently metered and that results from the utilization of a Renewable Energy Fuel Source.
- **Renewable Energy Fuel Source** means:
  - **Biogas:** Electricity generated from the combustion of gases derived from animal manure, sewage digesters, or from decaying plant matter. Includes sewage treatment plant digesters, dairy-based anaerobic digesters, and biomass gasification.
  - **Biomass** is electricity generated from combustion of:
    - The organic, non-fossil-based portion of municipal solid waste;
    - Energy crops;
    - Agricultural residues;
    - Untreated mill or forest residues; or
    - Biomass-derived energy from hybrid facilities, not including energy derived from fossil fuels.

Biomass does not include the combustion of black liqueur or preservative-treated wood waste.

- **Geothermal:** Electricity generated from naturally occurring underground heat.
- **Hydroelectric:** Electricity generated by the flow of water at facilities located outside of protected areas as defined by the Council.
- **Landfill Gas:** Combustion of gases derived from landfills.
- **Ocean:** Generation of electricity from wave, thermal gradient or tidal forces. Ocean energy is not likely achieve commercial status during this rate period, and it is eligible as Research Development & Demonstration (RD&D) during the FY 2007-2009 rate period.
- **Solar:** Electricity generated from solar heat and light. Includes solar photovoltaic systems (PV) and solar water heaters.
- **Wind:** Electricity generated from wind. Because project size affects costs, wind projects are broken out into three categories:
  - Utility-scale wind projects with a total installed capacity greater than or equal to 10 MW;
  - Wind projects with a total installed capacity of less than 10 MW but greater than 25 kW; and

- Wind projects with a total installed capacity of less than or equal to 25 kW.

#### **4.4 General RO Requirements**

- a. Only Incremental Renewable Energy Facilities and activities are eligible for the RO;
- b. The RO is only available during FY 2007 through FY 2009. There was no early start for the RO claims portion of the CRC;
- c. Renewable claims under the RO must be spent on qualifying renewable activities and or projects prior to the end of the rate period (e.g., money claimed against the renewable program under CRC should not be used for conservation measures). If all of the money claimed on renewables is not directed towards qualifying renewable projects or activities and reported to BPA by October 31, 2009, the customer will be billed for that portion of their renewable claim which remains unreported, plus interest. Interest will accrue on the unreported amount from the date of the customer's first renewable claim against the CRC program for the FY 2007-2009 rate period. Interest will be calculated by dividing the Prime Rate for Large Banks as reported in the Wall Street Journal, plus 4 percent; by 365. The applicable rate for Large Banks shall be the rate reported on October 31, 2009. Customers will be billed on the November 2009 bill, issued in December 2009;
- d. Claims made under the RO need to be substantiated using the PTR System (See section 4.21 for reporting requirements.);
- e. Administrative activities do not qualify for the RO unless otherwise exempted; and
- f. Individual customer RO claims are limited to the customer's total CRC eligibility for the fiscal year in which the claim is being made.

#### **4.5 What is a Qualified Renewable Energy Facility**

To be eligible for the RO, a renewable energy facility must satisfy the following criteria:

- a. The energy must be generated using a Renewable Energy Fuel Source and meet one of the following criteria.
  - 1. **Time of first use** — The facility must begin commercial operation no earlier than May 1, 1999, and no later than December 31, 2009.
  - 2. New Facilities energized after September 30, 2009, but prior to December 31, 2009, may qualify for the RO on a case by case basis, subject to BPA approval. To qualify, the customer must provide BPA with the verification information listed below. If any one of these conditions is not met, the customer must repay BPA for claims based on the facility, plus interest (see section 4.4(c),

except that the billing schedule will begin January 2010 for customers with facilities falling under this category.)

- i. Verification that the customer has entered into a power purchase agreement during FY 2007-2009 for the output of the facility;
  - ii. Evidence supporting the claim that the Facility will be energized by December 31, 2009. Examples: contractual incentives for commercial operation by January 31, 2009, or penalties for late performance; and
  - iii. Verification by no later than January 15, 2010, that the New Facility had achieved commercial operation by December 31, 2009.
3. Renewable Energy Facilities on-line prior to May 1, 1999, are eligible for RO if they have been rebuilt or expanded. The following criteria apply:
  - i. Rebuilt facilities qualify if the fair market value of the facility before the upgrades is less than 20 percent of the new total fair market value. In other words, capitol investments in the new facility must total at least 80 percent of the value of the assessed value of the repowered facility. Tax records should be provided to validate this claim.
  - ii. Incremental expansions to Renewable Energy Facilities qualify if the additional equipment generates incremental energy which is metered independently from the original facility. Replacement or modification of existing equipment that does not change gross power production, but results in a reduction of electric power consumption, will be considered conservation.
- b. **Location** — renewable energy facilities must be located in the Pacific Northwest, with the following three exceptions:
  1. The currently permitted Wyoming Wind Project at Foote Creek Rim and Simpson Ridge in Carbon County, Wyoming;
  2. Projects shown by the applicant to effectively displace operation of regional nonrenewable generation resources (subject to BPA's approval); or
  3. The project or a portion of the project serves load within the Pacific Northwest (subject to BPA's approval).

#### **4.6 Metering Requirements**

Except for PV, solar water heaters and RD&D projects, the output of renewable energy facilities must be metered by a revenue-quality meter at the point of delivery in accordance with generally accepted utility standards,

and output and meter calibration records must be available for inspection by BPA upon request.

#### **4.7 Power Purchases from Power Marketers**

Purchases from power marketers and pooling organizations are eligible for the RO provided:

- a. The underlying resources meet the eligibility requirements for renewable energy facilities; and
- b. The customer can supply documentation verifying the renewable energy resource eligibility; the amount and term of the purchase, the Project Costs, and attestation that the environmental attributes have not been sold or claimed elsewhere. The amount of the RO available for each type of underlying renewable energy facility is specified in tables 1 and 2 in section 4.16.
- c. Customers are required to retain and retire within their service territory the environmental attributes associated with power purchases from qualifying renewable energy facilities when claiming such purchases on their annual CRC report. If the environmental attributes are sold into the customer's green pricing program. Costs of administrating the green pricing program may qualify as eligible expenses. Revenues from the attribute sales and the pricing program must be reinvested in the green pricing program to qualify for the RO.

#### **4.8 Transfer of RO Claims for Renewable Energy Output**

Customers may enter contractual arrangements through which one customer would own or purchase the output from an eligible renewable energy facility and other customers would apply their RO to the output.

For example, Customer A could sign a power purchase agreement with a developer for 15 MW of wind power from a qualifying new renewable energy facility. Customer A could assign the right to claim the project as a new renewable energy facility to Customer B under a separate payment arrangement with Customer A. All of the project's output would be delivered to, and used in, Customer A's system, but Customer B would own and could claim the resource under the RO. The RECs from this project must be retired within one of the participating parties' service area(s) for the entire rate period and should not be subject of a second claim.

Customers may also transfer RO claims to other BPA customers by selling the attributes or RECs generated by eligible renewable energy facilities to other BPA customers.

#### **4.9 Environmental Attributes from Renewable Energy Sources**

This section applies only to Renewable Energy Certificates (Green Tags, RECs, or environmental attributes), not to Environmentally Preferred Power (EPP); section 4.10 addresses EPP.

RECs are eligible for RO, provided the following conditions are met:

- a. Megawatt-hours cannot be claimed twice under the RO. RECs associated with renewable energy claimed elsewhere under the RO are not eligible for additional RO benefits under this section. RECs from new facilities cannot be claimed under this program during this rate period if the energy from the project is the subject of a RO claim anytime during the rate period.
- b. Claims based on RECs from a single New Facility cannot total more during the 3-year rate period (for all customers) than could be derived from a claim based on one year of generation times the appropriate \$/MWh credit cap (table 1, section 4.16). Without this restriction, REC claims for a specific New Facility could be claimed for all three years of the rate period at a purchase price equal to the credit cap. Under this scenario, REC claims would total three times that of a straight facility claim. (The amount of credit associated with REC claims is equal to the purchase price of the REC, not to exceed the caps posted in tables 1 and 2; RECs can be claimed all three years of the rate period.)
- c. Only RECs which are retired within the purchasing utility's service area are eligible for the RO program. RECs sold outside of the utility's service area cannot be claimed by the seller but may be claimed by the purchaser. RECs resold in a premium green pricing program will be eligible for RO credit in an amount equal to the REC purchase price if the revenues from the green pricing program, net of REC purchase price, are reinvested in qualifying New Renewable Energy Facilities, other qualifying Renewable Education program(s), qualifying RD&D project(s) or the green pricing program. Costs of administrating the green pricing program may qualify as eligible expenses. Demonstration of reinvestment will be required in the October 31 annual report to BPA as required in section 4.21.
  1. The facility generating the RECs must be a qualifying Renewable Energy Facility as defined in section 4.5.
  2. The output of the generating resource from which the RECs originated is metered (section 4.6).
  3. The REC claim is accompanied by: (1) a generator attestation verifying the monthly output of the generation facility, that the RECs have been sold only once, and that the RECs retain associated emission offsets; (2) Wholesaler attestation(s) verifying that the RECs have been sold only once and retain associated emission offsets; and (3) an independent annual audit verifying purchase price. Verification of REC ownership from the Western Renewable Energy Generation Information System can be used in lieu of (1) and (2) above.
  4. RECs can only be claimed in the year in which they are generated.

5. RO credit amount: Payment scale is equal to the purchase price of the RECs, not to exceed the resource specific credit caps listed in table 1 or table 2 (section 4.16). Proof of purchase price must be verified via independent audit and provided to BPA by October 31 for the proceeding fiscal year.
- d. Solar exception. RECs from PV units claimed under the RO can be sold outside of the customer's service area because the credit for solar units has been reduced to \$500/kW.

#### **4.10 Renewables Purchases from BPA**

BPA currently offers three types of renewable products: (a) Environmentally Preferred Power (EPP), (b) Alternative Renewable Energy (ARE), and (c) RECs.

- a. **EPP and ARE:** BPA will reinvest the Green Energy Premiums (as defined in WP-07-FS-BP-05, page 29) associated with EPP and ARE sales in the Pacific Northwest Renewable RD&D projects. Therefore, 100 percent of the Green Energy Premium associated with EPP and ARE (\$10.50/MWh) is eligible for the rate credit under the RO.

ARE and EPP remarketed into green pricing programs is eligible for the RO if proceeds, net of the EPP/ARE purchase price, are reinvested in New Renewable Energy Facilities, Renewable Education program(s), qualifying RD&D project(s), or the green pricing program itself. Costs of administrating the green pricing program may qualify as eligible expenses. Demonstration of reinvestment will be required in the October 31 annual report to BPA required in section 4.21.

- b. **RECs:** BPA will reinvest the green energy premiums associated with EPP in Pacific Northwest renewable RD&D projects. Therefore, the amount of the RO for BPA's RECs will be 100 percent of the premium paid for this product. RECs remarketed into green pricing programs are eligible for the CRC if proceeds, net of the REC purchase price, are reinvested in New Renewable Energy Facilities, Renewable Education program(s), qualifying RD&D project(s), or the green pricing program. Costs of administrating the green pricing program may qualify as eligible expenses. Demonstration of reinvestment will be required in the October 31 annual report to BPA required under section 4.21.
- c. Customers are required to retain and retire within their service territory the environmental attributes associated with EPP or RECs purchased from BPA when claiming such purchases under the RO.

#### **4.11 Third Party Blended Renewable Resource Products**

A customer can receive credit under the RO for the purchase of a third party, or their own, blended renewable resource product consisting of existing or new renewable energy facilities meeting the eligibility criteria of the RO. The appropriate "new" credit will be given to the new portion of the product for one year of estimated generation. The "existing" portion of the blended product will be given the appropriate credit for existing renewable energy



facilities. Renewable energy claimed elsewhere under the RO is not eligible for additional RO benefits under this section.

Customers are required to retain and retire within their service territory the RECs associated with such transactions when claiming such purchases under the RO.

#### **4.12 Community Owned Renewable Projects**

Expenses associated with Community Owned Renewable Projects, incurred by the customer, which include but are not limited to interconnection, integration, and energy costs above the Proxy for Avoided Cost, which are not passed through to the utilities customers or to the Community-owned project, are eligible for a dollar-for-dollar credit. Community Owned Renewable Projects are New Facilities; therefore, claims based on energy production are limited to one year of actual generation. Consistent with other eligible activities and programs under this chapter, Administrative costs are not eligible.

#### **4.13 Renewable Education Programs**

Renewable Education Programs are customer-funded curriculum and demonstration projects. Education programs are eligible for a dollar-for-dollar rate credit, capped at the greater of 20 percent of the customer's total CRC over the rate period or \$25,000/year.

#### **4.14 Donations**

Donations to 501c(3) non-profit organizations promoting renewable resource development in the Pacific Northwest are eligible for the RO upon BPA approval. Examples of organizations that may qualify: Bonneville Environmental Foundation, Energy Trust of Oregon, Climate Trust, Last Mile Electric Coop, and Northwest Seed. Donations are limited to 20 percent of the customer's total CRC over the rate period. One hundred percent of the donated amount is eligible for the RO. BPA may waive the 20 percent cap on a case-by-case basis if there are compelling reasons to do so.

To qualify for credit, the following conditions must be met:

- a. The 501c(3) recipient will be asked to self-certify that at least 80 percent of the donation will be used to support renewable resource activities as contemplated elsewhere in this manual and must demonstrate that the donation was not used to support lobbying activities.
- b. The receiving organization will provide BPA and the donating customer a report documenting use of the donated funds by no later than October 31 of each year, for the preceding year. BPA reserves the right to audit the receiving organization.

#### **4.15 Contributions to Qualified Research Development & Demonstration Activities**

One hundred percent of the amount spent on qualified RD&D activities is eligible for the RO; however, renewable RD&D claims cannot comprise more

than 40 percent of the participating utility's total CRC over the rate period. Costs are limited to those incurred from October 1, 2006, to September 30, 2009. Electricity production obtained as a result of a RD&D activity will not qualify for RO credits. BPA may waive the 40 percent cap on a case-by-case basis if there are compelling reasons to do so.

BPA pre-approved RD&D activities include:

- a. The regional wind data collection program administered by Oregon State University;
- b. The Regional Solar Radiation Data Center administered by the University of Oregon, and the Wave Energy Technology Center;
- c. New ocean-powered renewable energy facilities; and
- d. BPA will approve small-scale (less than \$20,000 per installation) renewable energy demonstration systems on a case-by-case basis without consultation with the RTF, provided the project meets all of the following criteria:
  1. The performance of the project is measured on at least monthly intervals. Projects using revenue-quality meters are preferred but not required;
  2. The system performance and description of the project must be reported to the public via the Intranet, as well as local reporting mechanisms, before September 30, 2009; and
  3. The project falls under at least one of the Eligible Activities listed below, in section 4.15.1 and not specifically excluded in section 4.15(e).

#### **4.15.1 Eligible RD&D Activities**

The following categories of activities potentially qualify for the RO as RD&D activities. Qualification will be determined using the criteria listed in section 4.15.2.

- a. Assessment of the supply, location, development potential, or quality of renewable energy sources;
- b. General preparations (i.e., not in sole support of a specific project) for the development of renewable resource areas. These efforts may include identification and resolution of technical, environmental, and institutional issues potentially affecting resource development;
- c. Research regarding environmental or other issues affecting the development and operation of renewable energy facilities. These may be undertaken at a specific project, providing the results will significantly benefit other projects;

- d. Development or demonstration of new technologies with potentially significant application to the use of renewable energy sources;
- e. Demonstration of novel applications of established technologies using renewable energy sources (e.g., new applications of commercially available technologies). Conventional applications of commercially available technologies are not considered RD&D. For example: PV installations using conventional approaches/designs are no longer considered to be in the developmental phase and will not be considered RD&D. PV installations using new designs or novel applications may be considered developmental;

While a RD&D activity may be undertaken in conjunction with the development of a specific commercial project, the cost of the activity should not include the costs of developing or operating a proven commercial application. Efforts to lower costs through increased production or mass purchase of commercial technologies are not considered to be RD&D; and

- f. Provision of information useful for the evaluation, siting, design, or operation of facilities using renewable energy sources.

#### **4.15.2 Criteria used to Evaluate Proposed Renewable Resource Research, Development, and Demonstration Activities**

Other RD&D activities may be proposed and approved by BPA on a case-by-case basis or, at BPA's sole discretion, submitted to the RTF for review. The proposal must include research technology, renewable fuel source, location, objectives, approach/methodology, tasks, timeline, budget, and milestone reporting schedule. The proposal should clearly state the project's specific stage in the technology continuum (hypothesis, research, development, or demonstration). The proposal should also include a section addressing the criteria set forth here, as applicable:

- a. The activity should have a high probability of expanding the use of qualifying renewable resources in the Northwest;
- b. The activity should have a high probability of achieving one or more of the following objectives: reduced resource development or operating costs; improved technology performance (reliability, conversion efficiency, etc.); reduced environmental impact; improved project development characteristics (e.g., lead time); and improved forecasts of cost, performance, development timeline, or environmental impact;
- c. Preferably, activities should address resources promising low or declining costs, abundant quantity, modest or beneficial environmental effects, and favorable development characteristics, including short lead-time and modularity;

- d. Preference for activities designed to achieve multiple objectives and widespread benefits (e.g., the activity should foster the development of qualifying resources in general, as distinguished from primarily supporting the development of a specific commercial project). For example, assessment of the spatial extent, and general turbulence and wind shear characteristics of a wind resource area could be considered a qualifying RD&D activity, whereas studies leading to the placement of individual wind turbines are a responsibility of the commercial developer; and
- e. Projects that are co-funded/co-sponsored are preferred. Co-funded amounts are excluded from the RO credit.

#### **4.16 Renewable Energy Purchased from qualifying Renewable Energy Facilities**

Methods to calculate the RO credit earned by energy purchases from eligible Renewable Energy Facilities are described below. The \$/MWh cap for each resource type is shown in table 1 (New Facilities) and table 2 (Existing Facilities).

- a. **New Renewable Energy Facilities:** To be eligible for credit, the New Facility must qualify under sections 4.4, 4.5, and 4.6. The amount of the credit earned by New Facilities is based on the difference between Project Costs and the Proxy for Avoided Costs (\$42.17/MWh) and capped at \$27/MWh. Credit can be earned for up to one year of generation regardless of whether the facility is energized in the beginning or at the end of the rate period.

Credit for New Utility-scale wind projects will be calculated differently than other New Facilities because the Council updated project cost estimates for New Utility-scale wind projects. The revised cost estimate for Utility-scale wind increased by nearly 100 percent resulting in a more than 7-fold increase in the \$/MWh credit.

If the Council's new cost estimates were used as the sole basis for the rate credit for Utility-scale wind projects (as occurs with other New Facilities), BPA would create a windfall for purchasers of less expensive projects. (The difference between the actual costs and the Council's cost estimates can be significant.) Because of the \$6 million dollar cap on total renewable claims and because of the large amount of wind being developed in the Region, BPA decided to change the way utility-scale wind credit is calculated.

The credit for New and Existing Utility-scale wind projects will be based on actual Project Costs, not the Council's cost estimate. The Council's cost estimate for New Utility-scale wind will be

used to create the cap. Both the cap and the Council's estimate are posted in table 1.

Calculating the credit:

1. New Utility-scale wind. The amount of the RO is equal to the customer's share of the output from a New Utility Scale Wind project over any single fiscal year during the rate period, multiplied by the difference between actual Project Costs and the Proxy for Avoided Costs, not to exceed \$27/MWh;

Claims submitted as part of the October 31 report to BPA (section 4.21 b) should be based on actual generation and should use metered data. Claims based on forecasted generation should use capacity factors provided in table 1 and the name plate rating of the facility. Forecasted claims apply to projects not on line by the end of the rate period, but scheduled to be in commercial operation prior to December 31, 2009;

Third party verification (CPA audit) of Project Costs and actual generation should be included in the October 31 annual report to BPA (BPA may grant case-by-case extensions for audit reports.)

*New Utility-Scale wind Credit = [(cost of energy at the busbar for the year in which the claim is being made + integration costs for the year in which the claim is being made) - (Proxy for Avoided Cost)] x MWh generated over one year. NTE the cap posted in table 1; and*

2. All other New Renewable Facilities: The amount of the credit is equal to the customer's share of the output over any single fiscal year during the rate period, multiplied by \$/MWh credit provided in table 1.
- b. **Existing Renewable Energy Facilities:** It is BPA's objective to encourage the development of new incremental renewable energy facilities and activities. Therefore, the credit for existing facilities cannot exceed that of new facilities.

Existing facilities will be eligible for credit on energy generated during the entire rate period. Because of the 3-year rate period, the credit for Existing Facilities is capped at 33 percent of the credit given to New Facilities using the same renewable energy source. The amount of the \$/MWh credit for generation from Existing Facilities will be based on the customer's share of actual generation during the rate period, the type of facility, and the difference between the Project Costs during the year the claim is being made and the Proxy for Avoided Cost, not to exceed the \$/MWh caps posted in table 2 (capped at 33 percent of the cap

for New Facilities). Credit will only be given for metered generation during the rate period.

*Credit = [energy costs at the busbar for the year in which the claim is being made + integration costs for the year in which the claim is being made] – [Proxy for Avoided Cost] x MWh. NTE the cap posted in table 2.*

1. Third party verification (audit) of Project Costs for the year the claim is being made and third party verification of actual generation should be included in the October 31 annual report to BPA. BPA may grant case-by-case extensions for audit reports.
2. The existing facility must qualify under sections 4.5 and 4.6.
3. No credit will be given to existing solar energy facilities.

**Table 1: New Renewable Facility Credit**

<b>New Facilities</b>			
<b>Total Credit for each Facility = (Capacity) x (Capacity Factor) x (New Facility Credit). If claiming actual generation, disregard capacity factor and use metered data. If claiming forecasted generation use the nameplate rating to determine capacity and Capacity Factors posted below.</b>			
<b>Credit should not exceed the resource-specific caps listed below. Credit for 1 year of Generation.</b>			
<b>Resource type (project size)</b>	<b>Project Cost (Proxy) (\$/MWh)</b>	<b>Credit (\$/MWh)<sup>1</sup></b>	<b>Capacity Factor<sup>2</sup></b>
Biogas <sup>3</sup>	51.00	8.50	90%
Geothermal <sup>4</sup>	67.84	25.34	92%
Hydro <sup>5</sup>	48.46	5.96	80%
Micro hydro (<1 MW) <sup>4</sup>	79.00	27.00	58%
Landfill gas (> 2 MW) <sup>3</sup>	42.00	-0.50	80%
Landfill gas (less than or equal to 2 MW) <sup>6</sup>	50.00	7.50	90%
Wind (less than or equal to 25 kW (no Tx)) <sup>3</sup>	270.00	27.00	14%
Wind (less than or equal to 10 MW but > 25 kW) <sup>7</sup>	73.00	27.00	30%
Wood/Forest residue (wood only, not cogen) <sup>3</sup>	68.00	25.50	90%
Wood/Forest residue (cogen) <sup>3</sup>	51.00	8.50	90%

**Table 1, continued**

New Utility-scale wind			
Credit = (Project Cost - Proxy for Avoided Cost) x (Capacity) x (Capacity Factor). If claiming actual generation, disregard capacity factor and use metered data. If claiming forecasted generation, use the nameplate rating to determine capacity and the Capacity Factor posted below.			
	Project Cost (Proxy) (\$/MWh)	Cap (\$/MWh)	Capacity Factor <sup>2</sup>
Wind - utility scale (+10 MW) <sup>8</sup>	80.00	27.00	30%
Solar			
	Project Cost (Proxy) (\$/MWh)	Credit	Capacity Factor
Solar water heaters, collectors > 31 ft or evacuated tubes with equivalent output <sup>4</sup> (\$ credit per installation, based on capacity)	117.00	500.00	NA
Photovoltaic (PV) Credit in \$/kW <sup>4</sup> (\$ credit per kW)	290.00	500.00	NA
<sup>1</sup> New Resource Credit (\$/MWh) = (Project cost as posted in table 1) - (Proxy for Avoided Cost). NTE \$27/MWh. \$27/MWh Cap reflects the FY 07 value of 20 years of CO <sup>2</sup> offsets. (Northwest Power and Conservation Council). <sup>2</sup> Capacity Factors taken from the same sources as the cost estimates. Actual metered generation should be used if the project is in commercial operation. <sup>3</sup> Project Cost is the FY 07, 20-year levelized cost of shaped and delivered energy (see Council Memo dated August 10, 2005). <sup>4</sup> Cost data derived from unsolicited proposals submitted to BPA and BPA project files. <sup>5</sup> Estimate based on one project. <sup>6</sup> Costs derived from Energy Trust of Oregon "Sizing and Characterizing the Market for Oregon Biopower Projects" April 2005. <sup>7</sup> Costs derived from an Energy Trust of Oregon report and from Northwest Power Planning and Conservation Council staff analysis. ETO report: "A Comparative Analysis of Community Wind Power Development Options in Oregon" July 2004. <sup>8</sup> Project Cost is the FY 07, 20-year levelized cost of shaped and delivered energy (see Council Memo dated July 13, 2006).			

**Table 2: Caps on Credit for Existing Renewable**

<b>Resource type</b>	<b>Cap (\$/MWh)</b>
Biogas	2.81
Geothermal	8.36
Hydro	1.97
Micro hydro (< 1 MW)	8.91
Landfill gas > 2 MW	-0.17
Landfill gas less than or equal to 2 MW	2.48
Wind less than or equal to 25 kW	8.91
Wind less than or equal to 10 MW	8.91
Wind - utility scale (+10 MW)	8.91
Wood/Forest residue (wood only, no Cogen)	8.42
Wood/Forest residue (Cogen)	8.42
Solar water heaters, collectors>35 ft <sup>2</sup>	NA
Photovoltaic (PV)cCredit in \$/kW	NA

**Table 3: Renewable Credit Proxy Values**

	<b>(\$/MWh)</b>
<b>Proxy for Avoided Costs =</b>	
Avg of FY 07 Flat PF & FY 07 IOU Settlement Flat-Block Mid C mkt price <sup>1</sup>	<b>42.17</b>
<b>Cap =</b>	
Proxy for present year value of a 20-year CO <sup>2</sup> offset <sup>2</sup>	<b>27.00</b>
<sup>1</sup> The 2007 forward flat block Mid-C market price used in the residential exchange settlement is equal to \$58.46/MWh and the FY 2007-2009 flat PF preference rate is equal to \$25.87/MWh, giving a Proxy for Avoided cost of \$42.17/MWh Value will be fixed at FY 07 levels not adjusted for inflation or variations in market prices.	
<sup>2</sup> Cap based on NW Power and Conservation Council estimates of the average 2007 current year dollar value of a CO <sup>2</sup> offset. Any credit below \$27/MWh could be considered cost effective if the CO <sup>2</sup> credits are not sold. CO <sup>2</sup> value will be fixed at FY 07 levels not adjusted for inflation.	



#### **4.17 Effects on Net Requirements Load**

Adjustments to the customer's Subscription contract and Net Requirements Load will be independent of credit given under the RO. No adjustment to net requirements load is necessary for REC and EPP purchases.

#### **4.18 Duration of the RO and Renewable Energy Purchases**

The RO can only be applied to activities undertaken during the rate period and energy generated during the rate period, except for special considerations given to new facilities energized between January 1, 2006, and December 31, 2009 (see section 4.5).

#### **4.19 Administration**

Applications, notifications, inquiries, and other matters related to the RO for renewable energy resources should be directed to the following address:

Bonneville Power Administration  
Attn: Debra Malin, MS PL-5  
P.O. Box 3621  
Portland, Oregon 97208  
Phone: (503) 230-5701  
E-mail: djmalin@bpa.gov

#### **4.20 Optional Pre-Application**

At any time, a customer may submit a Pre-Application containing the information described below to obtain a preliminary and conditional determination of a renewable energy facility's or activity's eligibility for the RO:

*(Note: Pre-Application is optional, but the October 31 report will need to include this information regardless of whether a Pre-Application is submitted.)*

- a. Name and type of facility or activity or other official designation;
- b. Location and address of the facility and type of renewable energy source;
- c. Name, address, and telephone number of a point of contact to respond to questions or requests for additional information;
- d. A clear statement of how the renewable energy facility or activity satisfies the eligibility criteria;
- e. If the customer intends to purchase power from a power marketer or enter into an arrangement with another customer, a description of the purchase or arrangement; and
- f. Other applicable information as required elsewhere in this chapter.

## 4.21 Reporting requirements

- a. Customer request for Renewable funds and the pro rata reduction:** Due to the \$6 million dollar annual cap on total annual renewable rate credit, BPA requires customers to request total annual renewable credit claims by July 15 of each year for the following fiscal year. If total utility requests exceed \$6 million dollars in any year, all requests will be pro rata reduced for that year so that the \$6 million dollar cap is not exceeded. Note: Small (<7.5 aMW load) customers and federal customers will not be pro rata reduced but their requests will count against the \$6 million dollar cap. In the event of a pro rata reduction, BPA will notify customers of the amount their request was pro rata reduced by no later than August 1 of each year.

Due to the increased volume of renewable claims against the RO, BPA will no longer allow adjustments to renewable requests (claims) after the pro rata reduction. The dollar amount remaining after the pro rata reduction will be considered a final number and the requesting utility has an obligation to spend this amount of money on renewables before the end of the rate period.

Customers have the option of rolling forward that portion of their July 15 request which was pro rata reduced (e.g., Customers may request it again in the following fiscal year).

The amount reduced via the pro rata reduction should be spent on conservation, rolled forward as a renewable request in the next year, or the customer can opt out of the program.

Renewable requests made under this section should be sent to the address shown in section 4.19 by July 15 of each year of the rate period.

- b. Annual Reports to BPA:** Customers must submit annual reports to BPA validating renewable claims made under the RO. Annual reports should use the PTR System and should be submitted by no later than October 31 of each year for the proceeding fiscal year's renewable claim.

Due to increasing pressure on the \$6 million cap, BPA will no longer accept or approve additional requests for renewable credit for FY 2009 if renewable claims from FY 2007 and FY 2008 have not been substantiated via the annual October 31 reports. This is consistent with reporting required for conservation under section 2.11.

October 31 reports to BPA validating pro rata reduced July 15 renewable rate credit requests (claims) should contain the following information to be approved:

1. A statement of the annual and monthly metered Net Electric Energy generated by the renewable energy facility during the previous fiscal year and claimed for credit by the customer;
2. A statement showing how the customer's renewable rate credit claim was derived and computed;
3. Applicable information required elsewhere in section 4, including third party verification: BPA recognizes it may be difficult to obtain third party verification by October 31 for the previous fiscal year and may grant extensions for third party verification on a case-by-case basis;
4. RD&D and Donations: An Application for Certification for a qualified RD&D activity or eligible donations must contain a description of the qualified facility or activity, verification that applicable criteria have been met, and a copy of the invoices that are the basis for the customer's claim for credit (if applicable); and
5. Purchases from BPA: The customer will reference the contract, the BPA product, the amount of the purchase (kWhs), and how much of the rate credit is being applied to this purchase in the annual October 31 report.

#### **4.22 Additional Facility Reporting Requirements**

For each project, customers may submit a pre-certification application to BPA before a resource purchase or renewable resource project investment to ensure that it will qualify for the RO. Pre-certification application is optional, but encouraged.

#### **4.23 True-up for Generation-Based Claims**

Due to the \$6 million dollar cap on renewable claims, utilities making RO claims on new and existing facilities will be required to make claims based on actual generation. True-ups will only be accepted for New Facilities energized after the end of the rate period, but prior to December 31, 2009. (These facilities use forecasted generation rather than actual generation.)

#### **4.24 Procedures for Processing Reports and Applications**

BPA will process Pre-Applications and Annual Reports and notify the customer of its determination within 60 days of receipt of the Pre-Application and 30 days of receipt of the Application for Certification.

1. Notice to applicant — If an application meets the requirements of the RO, BPA will issue a written notice to the applicant;

2. Disqualification — If an application does not meet the requirements of the RO for renewables or if some of the kWh claimed in the application are disallowed as unqualified, BPA will issue a written notice denying the application in whole or in part, with an explanation of the basis for denial; and
3. Appeal of determination — A customer may appeal a decision within 60 days. Appeals should be sent to the address shown in section 4.20.

#### **4.25 Rules for Pooling Renewables**

A project or proposal from a pooling entity is subject to the same criteria, standards, and procedures as any other entity. The pool must comply both on an individual and aggregate basis.

##### **Renewable Pooling Requirements**

- a. Pooling utilities are responsible for reporting their own individual claims and semi-annual reports. Claims are subject to applicable reporting requirements outlined elsewhere in this document;
- b. The pooling organization will provide an annual summary report to BPA. The report shall document the claims of all pooling participants; and
- c. If the pooling entity has a mix of customers using different conservation or renewable approaches, the pool must keep customers using different approaches separate for reporting purposes.

#### **4.26 Technical Specifications for PV systems and Solar Water Heaters**

- a. **Customer-side solar photovoltaic systems** — Eligible PV systems must meet the following requirements:
  1. Photovoltaic modules and inverters must be certified by the California Energy Commission (CEC). The lists of CEC-certified modules and inverters are posted on the California Energy Commission Web site (<http://www.consumerenergycenter.org/erprebate/equipment.html>);
  2. The system must be installed by a licensed contractor, unless installed by the purchaser, and must be installed in conformance with the system manufacturer's specifications and with applicable electrical codes and standards;
  3. Photovoltaic modules must be listed by a nationally recognized testing laboratory as meeting the requirements of the Underwriters Laboratory Standard 1703. Inverters must be listed by a nationally recognized testing laboratory for safe operation. Further, all grid-

connected, inverter-based systems must meet the Institute of Electrical and Electronic Engineers Standard 929-2000. In the absence of a recognized testing standard, manufacturers of concentrator photovoltaic systems must provide acceptable evidence of one year of reliable operation of that model of equipment; and

4. Photovoltaic systems credited under the RO must be warranted as follows:
  - i. The warranty must cover the photovoltaic panel components of the generating system against breakdown or degradation in electrical output of more than 20 percent from their originally rated electrical output in the first 20 years, and
  - ii. Other components of the generating systems against breakdown or degradation for five years, including the full cost of repair or replacement of defective components or systems.
- b. **Solar Domestic Water Heaters** — Eligible solar domestic water heating systems must be designed, installed, inspected, and found to be in substantial compliance with the most recent version of the "**Bright Way to Heat Water Program - General and Technical Specifications.**" These program specifications are available on the PTR System, under Downloads. Utilities claiming renewables credit for solar water heating systems under the RO are required to sign a Bright Way to Heat Water licensing agreement, available from BPA.

## Examples

### **Existing Utility Scale Wind**

Big City Energy wants to use its rate credit to offset the cost of purchasing 20 MW of energy from the Big Wind Project (energized in 2001). The busbar CY 2007 power purchase price is \$44/MWh, their contracted integration charges are \$9/MWh. The project generated (and Big City Energy purchased) 40,000 MWh in FY 2007, 60,000 MWh in 2008 and 50,000 MWh in 2009. This project would be classified as an Existing Facility and as a utility-scale wind project.

$\$/\text{MWh Credit} = [(\text{Contracted Power Cost}) + (\text{Contracted Integration Charges})] - (\text{Proxy for avoided cost}).$

NTE 33 percent of the applicable New Facility credit.

$\$/\text{MWh Credit} = [(\$44/\text{MWh}) + (\$9/\text{MWh}) - (\$42.17/\text{MWh}) = \$11.83/\text{MWh}.$

However,  $\$11.83/\text{MWh} > 33$  percent of the credit given to New Utility Scale Wind facilities (e.g. Existing Utility-scale wind projects are capped at  $\$9.00/\text{MWh}$ ).

Therefore, the  $\$/\text{MWh Credit}$  for the purchase of energy from the Big Wind Project is capped at  $\$9.00/\text{MWh}$ .

$\text{Total Credit} = (\text{Energy Generated}) \times (\$/\text{MWh Credit})$

$\text{Total Credit} = (150,000 \text{ MWh}) \times (\$9.00/\text{MWh}) = \$1,350,000$

Big City Energy can submit a request for a claim for  $\$1,350,000$  anytime during the rate period, but the amount claimed in one year cannot exceed their annual CRC credit, and the claim will need to be substantiated in the next October 31 report.

Big City Energy must have the output and costs independently certified by a CPA and include these verification reports in their October 31 annual report to BPA for the year in which they make the claim.

### **New small wind project**

During the FY 07-09 rate period PUD #1 signs an agreement to purchase a wind project within their service area. The Project is contracted to be energized by December 31, 2009. Project consists of two 1.5-MW turbines. This is a New Wind project with a capacity factor less than or equal to 10 MW but greater than 25 kW.

$\text{Credit} = (\text{Capacity}) \times (\text{Capacity Factor}) \times (\$/\text{MWh Credit}) \times (\text{hours/year})$

$\text{Credit} = (3 \text{ MW}) \times (0.30) \times (\$27/\text{MWh}) \times (8,760) = \$212,868. (\$27/\text{MWh} = \text{Cap})$

PUD #1 can submit a claim for this project anytime during the rate period, but must include in their October 31 annual report verification that they have executed a power purchase agreement during the rate period and that contractual incentives are in-place to ensure the project is energized by December 31, 2009. By no later than January 15, 2010 PUD #1 must also demonstrate that the project was energized by December 31, 2009. If the project fails to come on-line by December 31, 2009, the PUD must repay BPA for the credit claimed for this project plus interest.

If PUD #1's request is reduced due to a pro rata reduction in 2007 or 2008, the PUD can roll the portion of their project credit forward into the next FY. There will be no ability to roll forward in 2009.

Although the PUD can claim the renewable project during any year, they must substantiate the claim in the next October 31 annual report. PUD #1 must retire the RECs generated by this project during the 2007-2009 rate period within their service area. PUD #1 cannot simultaneously claim energy generated by their wind project under the rate credit program and sell the attributes or Renewable Energy Certificates (RECs) separately.

See table 1, section 4.16.

**New utility-scale wind project with self-supplied integration services:**

East Side Electric signs a contract to purchase 60 percent of the output of the 50 MW White Eagle wind project. The busbar cost of the energy is \$48/MWh and integration costs are \$20/MWh.

The project is scheduled to be energized in Sept. 2007. The White Eagle project would be classified as a New utility scale wind project.

Credit = ((Project Costs) - (Proxy for Avoided Cost)) x (Capacity) x (Capacity Factor) x (hours/year)

Credit = [(\$48/MWh + \$20/MWh) - (\$42.17)] x (50 MW x 0.60) x (0.30) x (8760)  
= \$2,036,437.

Credit = \$25.83/MWh

East Side can submit a request for a claim for this project anytime during the rate period, but the amount claimed in any one year cannot be greater than the customers total CRC for that year. If East Side's total eligibility is only \$1,000,000/year, then this utility must submit their request for a claim for this project over several years rather than in a single year.

East Side must verify, via a third party audit, generation amounts, purchase price, and justification for their near-term opportunity costs associated with self-supplied integration. The audit report and the justification for integration costs should be supplied to BPA in their October 31 annual report for the year in which they made the claim (e.g., report due by October 31, 2007, for FY 2007). This utility may want to keep the busbar energy and integration costs confidential, in such case they should arrange for a confidentiality agreement with BPA.

Generation exceeding the requested claim can be rolled forward and claimed in the following year. (2009 generation cannot be rolled forward to FY 2010.)

East Side must retire the RECs generated by their portion of the White Eagle wind project during the FY 2007 - 2009 rate period within their service area. East Side

cannot simultaneously claim energy under the rate credit program and resell the associated RECs to another utility or marketer.

See section 4.16(a).

**RECs**

Jones County PUD purchases 50,000 MWh of Calendar Year 2009 RECs from PUD #1's portion of the wind Project. Jones paid PUD #1 \$5/MWh for the RECs and submits a claim to BPA for \$250,000. The calculations are correct but BPA denies Jones' claim because:

- a) BPA determined that East Side also submitted a claim on the same project.
- b) Some of the RECs will be generated after the end of the rate period. Only RECs generated during the rate period are eligible. Jones will have to use the amount of rate credit they claimed for these RECs on another eligible Renewable activity before the end of the rate period. The other utility making a claim on this project may be required to repay BPA for their claims made on this project.

See section 4.9.



# Renewable Reporting Timeline



