

**Bonneville Power Administration  
Energy Efficiency**

**Conservation Rate Credit (CRC)  
and  
Conservation Acquisition  
Agreements (CAA)**

**Implementation Manual**

**“CRC Implementation Manual,” as described in BPA’s 2007 Wholesale Power Rate Schedule and GRSP’s means sections 1, 2, 4, and attachment C of this Manual. Sections 1 and 3 pertain to Conservation Acquisition Agreements.**

**April 2007 REVISION\***

*\*See list of key changes on page i of this document.*



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## Implementation Manual Changes Summary - April 2007\*

Title	Description	Implementation Manual Page Number
Cost Cap Raised to 70 percent	Industrial, non-lighting commercial, and non-standard contracts cost cap will be raised to 70 percent, effective February 1, 2007.	9, 10, 11, 62, 63, 69, 76, 78, 81, 83, 86-88, 90
Freeze Resistant Stock Water Tanks/Fountains	Explicitly lists Freeze Resistant Stock Water Tanks/Fountains and the associated credit/reimbursements.	86
Industrial Lighting Custom Project Option	If energy savings from lighting projects are over 100,000 kWh, BPA will allow utilities to use the custom project approach.	11, 69, 87
Geothermal Heat Pumps	<ul style="list-style-type: none"> <li>• Remove language regarding a potential change to the credit/reimbursement based on measure cost. Measure credit/reimbursement remains unchanged.</li> <li>• Clarify that ground source heat pump systems must be new systems, not replacement of existing hardware that failed.</li> </ul>	76
ENERGY STAR® Dishwashers	Remove language regarding a potential drop in the credit/reimbursement based on measure cost. Measure remains the same.	78
Clothes Washer Clarification	<ul style="list-style-type: none"> <li>• Remove old language related to January 1, 2007 specification change.</li> <li>• Clarify \$70 reimbursement for verified electric water heat, \$25 reimbursement for gas or unverified electric water heat. Measure remains the same.</li> </ul>	77
HZ1 Heat Pumps with Ducts Inside	Starting October 1, 2007, BPA will no longer provide credit/reimbursements for air source heat pumps with "ducts inside" located in heating zone 1.	70, 71
9.5 Heat Pumps	Starting October 1, 2007, BPA will remove the higher credit/reimbursement tier for air source heat pumps with HSPF 9.5.	70, 71
Annual Audit Report Timing	State/CPA Audit reports are due once per year, but not necessarily on March 31.	23
Low Income Single Pane Windows	Single pane windows with storm windows on low income residences qualify as "single pane" existing.	73
Add Rebuilt Wheel-Line Levelers	BPA will reimburse \$0.75 per rebuilt wheel-line leveler.	84

\*Changes made to the Implementation Manual prior to April 2007 that were posted to the BPA Energy Efficiency Web site as errata are not included in the summary of changes. Those errata have been incorporated into this document.

## Acronyms and Abbreviations Used in this Document

(Additional definitions associated with the Renewables Option of the CRC are provided in section 4. Definitions associated with the Reimbursement Strategies and Levels are located in attachment A.)

<b>AE:</b>	BPA Power Account Executive
<b>AgSO:</b>	Agriculture Standard Offer
<b>AICPA:</b>	American Institute of Certified Public Accountants
<b>Alliance (or NEEA):</b>	Northwest Energy Efficiency Alliance
<b>BPA:</b>	Bonneville Power Administration
<b>C&amp;ISO:</b>	Commercial and Industrial Standard Offer
<b>C&amp;RD:</b>	Conservation and Renewables Discount rate credit (expired September 30, 2006)
<b>CAA</b>	Conservation Acquisition Agreement
<b>CAP:</b>	Community Action Partnership (or Program)
<b>CEC:</b>	California Energy Commission
<b>CEE:</b>	Consortium for Energy Efficiency
<b>ConAug:</b>	Conservation Augmentation (expired September 30, 2006)
<b>COTR</b>	BPA Contracting Officer's Technical Representative
<b>Council:</b>	Northwest Power and Planning Council
<b>CP:</b>	Custom project
<b>CPA:</b>	Certified Public Accountant
<b>CRC:</b>	Conservation Rate Credit
<b>DSEI:</b>	Customer distribution system efficiency improvements
<b>CVR</b>	Conservation voltage regulation
<b>EE:</b>	Energy Efficiency (BPA)
<b>EER:</b>	Energy Efficiency Representative (BPA)
<b>EPP:</b>	Environmentally Preferred Power rate schedule
<b>ESO+ (or ESO Plus):</b>	Expanded Standard Offer (for Commercial and Industrial Lighting)
<b>ETO:</b>	Energy Trust of Oregon
<b>FAF:</b>	Forced air furnace
<b>FPS:</b>	Firm Power Products and Services rate schedule
<b>HDD:</b>	Heating degree days
<b>HP:</b>	High performance, heat pump, <u>OR</u> horsepower, depending on context.



<b>HSPF:</b>	Heating Season Performance Factor
<b>HTR:</b>	Hard to reach (market)
<b>HVAC:</b>	Heating, ventilation, and air conditioning
<b>HZ:</b>	Heating zone
<b>IOU:</b>	Investor-owned utility
<b>kWh:</b>	Kilowatt-hour – measure of electric energy
<b>LML:</b>	Long measure life
<b>LO:</b>	Lost opportunity
<b>Low-Income:</b>	Low-income, as defined for the federal Weatherization Assistance Program, is 150 percent of the poverty income levels that are posted on the program Web site: <a href="http://www.waptac.org/">http://www.waptac.org/</a> . If a statewide definition has been approved for the federal low-income weatherization program in that state, that level will substitute for the default level provided above.
<b>M&amp;V:</b>	Measurement and verification
<b>MB:</b>	Market barriers
<b>MEF:</b>	Modified energy factor
<b>MF:</b>	Multifamily home
<b>MH:</b>	Manufactured home
<b>Mid C:</b>	Mid-Columbia – A regional wholesale energy market
<b>MW:</b>	Megawatt – measure of electric energy
<b>MWh:</b>	Megawatt-hour – measure of electric energy
<b>NCAT:</b>	National Center for Appropriate Technology
<b>NEEA (or Alliance):</b>	Northwest Energy Efficiency Alliance
<b>NEEM:</b>	ENERGY STAR <sup>®</sup> Manufactured Housing was formerly known as Northwest Energy Efficient Manufactured Housing Program and before that as Super Good Cents Manufactured Housing.
<b>NEMA:</b>	National Electrical Manufacturers Association
<b>NR:</b>	New Resource Firm Power rate schedule
<b>ODP:</b>	Open drip proof
<b>PCA:</b>	Purchase of Conservation Agreement
<b>PF:</b>	Priority Firm rate schedule
<b>PTCS™:</b>	Performance Tested Comfort Systems certification for duct sealing and heat pump commissioning
<b>PV:</b>	Photovoltaic (solar)
<b>RD&amp;D:</b>	Research, development, and demonstration

<b>REC:</b>	Renewable Energy Credit
<b>ResSO:</b>	Residential Standard Offer
<b>RL:</b>	Residential Load rate schedule
<b>RO:</b>	Renewables Option of the Conservation Rate Credit
<b>RTF:</b>	Regional Technical Forum
<b>SEER:</b>	Seasonal Energy Efficiency Ratio
<b>SF:</b>	Single family (or site built home)
<b>SIS:</b>	Scientific Irrigation Scheduling
<b>Std:</b>	Standard
<b>TEFC:</b>	Totally enclosed fan cooled motor
<b>TRC:</b>	Total resource cost
<b>TRCs:</b>	Tradable Renewable Certificates
<b>TSP:</b>	Technical Service Proposal
<b>WTP:</b>	Willingness to Pay (BPA)

## Sector Definitions

<b>Agricultural:</b>	<p>Electrical energy used by a farm business whose primary purpose is land cultivated for food production or land used for breeding or raising of domestic live stock (including fish, oysters, etc.). Any on-farm measures are considered "agricultural," with the exception of major processing of farm products on-site.</p> <p>This sector also includes any lands involved in major irrigation loads, regardless of the business purpose.</p> <p>The distinction between agricultural and industrial generally rests with the property line. Processes off farm are industrial; on farm are agricultural.</p> <p>Examples:</p> <ul style="list-style-type: none"> <li>○ Dairies and storage of milk is agricultural; pasteurizing, homogenizing, dehydrating, and bottling of milk, and ice cream. Cheese and butter production is industrial.</li> <li>○ Potato storage on farm is agricultural; potato storage at a co-op or at a processor is industrial.</li> <li>○ Pumping for fish farms and refrigeration of fish before shipping is agricultural; freezing, storing, and canning of fish is industrial.</li> <li>○ Orchard fruit stored temporarily on the farm, like grain, milk, or potatoes, is agricultural, but if it is centrally stored by a middle-man, co-op, or processor, it is industrial.</li> <li>○ Wineries are agricultural if the wine is grown, stored, pressed, cooled, and even bottled on the farm.</li> </ul>
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	<ul style="list-style-type: none"> <li>o Golf courses with irrigation load are agricultural for the purposes of their irrigation loads.</li> </ul> <p>The nature of the choice is tied to the load and the process as much as it is to the building or business type.</p>
<b>Commercial:</b>	<p>An energy-consuming sector that consists of service-providing facilities and equipment of businesses; federal, state, and local governments, and other private and public organizations.</p> <p>The commercial sector is generally defined as non-manufacturing business establishments, including hotels, motels, restaurants, wholesale businesses, retail stores, and health, social, and educational institutions.</p>
<b>Industrial:</b>	<p>An inclusive term for any fixed equipment, building, or complex for the production of goods in connection with, or as part of, any process or system, and, in general, within which the majority of energy use is not devoted to HVAC or to meet the potable hot water energy load requirements of a facility.</p> <p>Also included are electric distribution systems, conservation voltage regulation (CVR), and water/waste-water systems.</p> <p>Any storage, processing (transportation), or other activities involving farm products off the farm is considered industrial food processing.</p>
<b>Residential:</b>	<p>Any electric energy conservation measure that is used in a residential setting. This includes single family residences, multifamily residential structures (up to 3 stories high), and manufactured homes.</p> <p>Excluded are temporary residences such as hotels, motels, nursing homes, dorms, or any other generally temporary quarters.</p> <p><i>(Multifamily housing above three stories is considered commercial.)</i></p>
<b>Other:</b>	<p>Other non-building energy-consuming facilities/devices, such as LED traffic signals.</p>

## 1.0 Introduction

Two major conservation initiatives were developed for the Bonneville Power Administration's (BPA) Post-2006 Conservation Portfolio of Programs -- the Conservation Rate Credit (CRC) and Conservation Acquisition Agreements (CAA). These initiatives replaced the Conservation and Renewables Discount (C&RD) and Conservation Augmentation (ConAug) initiatives.

*(The words utility and customer are used interchangeably to indicate CRC and CAA participants.)*

The new initiatives are separate conservation-funding mechanisms with many common and complementary features. Both initiatives use the Regional Technical Forum's (RTF) Planning, Tracking, and Reporting (PTR) System (<http://ptr.nwcouncil.org/>), its list of qualifying measures, verification protocols, and custom project approval processes. The CRC credit appears on utilities' monthly power bills. The credits are substantiated by acceptable reports submitted by the customer. The CAA reimbursement is based on acceptable invoices submitted by the customer.

The basis for this document is the "Final Post-2006 Conservation Structure" (June 28, 2005) document (attachment D) and the "Post-2006 Conservation Program Reimbursement Strategies and Levels" (April 2007) document (attachment A) both of which are posted on the BPA Energy Efficiency (EE) Web site.\*

### 1.0.1 Post-2006 Conservation Program Principles and Policies

Five conservation principles were included in BPA's Final Record of Decision on the short term Regional Dialogue Policy (February 2005) and provide the framework for future conservation program design purposes. In addition to the five principles, seven key policy directives guide BPA's Post-2006 Conservation Program Structure. The principles and policy directives are posted on the EE Web site at <http://www.bpa.gov/Energy/N/projects/post2006conservation/pdf/Post2006Proposal.pdf>.

In addition, limited renewables measures are available to assist utilities and BPA in continuing to be major supporters of renewable generation in the Pacific Northwest.

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\* Materials referenced on the BPA Energy Efficiency Post-2006 Web site can be found at: <http://www.bpa.gov/Energy/N/projects/post2006conservation/> unless otherwise noted. Customers without Internet access should contact their Energy Efficiency Representative for more information or for copies of the referenced materials.

This document is organized into five sections:

- Section 1 describes the implementation guidelines common to both funding sources (i.e., CRC and CAA);
- Section 2 describes the implementation guidelines specific to the CRC;
- Section 3 describes the implementation guidelines specific to the CAA;
- Section 4 describes the implementation guidelines for the Renewables Option under the CRC;
- Section 5 (attachments) provides additional details or specific documents to assist participants in implementing the CRC or CAA.

### **1.1 Key Features of the Conservation Rate Credit and Conservation Acquisition Agreement**

Key features of the CRC and CAA initiatives include:

- Voluntary choice by power customers whether to participate and to what extent they participate;
- CRC funding is proportional to the amount of power purchased from BPA. CAA funding levels are negotiated for each CAA contract;
- The intent of both funding initiatives is to achieve conservation at the lowest possible cost;
- BPA's agreements are between the customer and BPA, not between the customer's consumers and BPA. The utilities will design and run programs, and BPA will design reimbursement rules and levels for the participating utilities and federal customers;
- Local control and accounting simplicity will be reflected in BPA's willingness to pay (WTP) for achieved and measured conservation at set levels of credit/reimbursement (deemed reimbursement, or cents per kilowatt-hour (kWh) up to a cap), allowing utilities to determine how to design and operate their own programs to deliver the savings;
- Administrative support will be allowed to assist utilities for planning and implementation of conservation programs;
- Credit levels in the CRC are generally consistent with the reimbursement levels in the CAA;
- CRC credits and CAA reimbursements are available for cost-effective conservation measures in all sectors (i.e., residential, commercial, industrial, agricultural, and other); and
- Information on individual utility expenditures and achievements resulting from BPA funding will be made available to the public, as appropriate.

#### **1.1.3 Federal Agency Program**

In addition to using the CAA and CRC as the primary mechanisms for delivering energy savings from participating utility customers, BPA's portfolio

of energy efficiency programs will continue to include acquiring energy savings from projects implemented under Interagency Agreements, primarily with directly-served federal agency customers. These additional energy savings contribute to achieving the regional conservation goals at the lowest possible cost.

When BPA funds are used to pay for electric energy savings from federal facilities, only cost-effective conservation, as defined by the total resource cost (TRC) test in the Northwest Power and Conservation Council's (Council) most current Power Plan and approved by BPA, will be eligible for such reimbursement. In addition, the Post-2006 CRC and CAA Implementation Manual, procedures, and methods, generally equivalent to those used in CRC/CRC utility relationships will be used for federal agency project relationships, including applicable M&V and oversight procedures.

## **1.2 Administrative Costs Guidelines and Qualifying Activities**

### **1.2.1 General Administrative Costs Guidelines**

- The administrative cost allowance is intended to cover internal utility administrative costs associated with the delivery of conservation including, but not limited to, general awareness building and general marketing (e.g., Web site maintenance, efficiency messaging, generic newsletters), record keeping, reporting, staff time to assist with BPA evaluations, overhead, contribution to internal staffing, administrative costs of a third party that implements the utility's conservation programs or that are passed through to an "implementation pool;"
- The administrative allowance is above and beyond the BPA WTP parameters;
- Utilities can decide when they submit each CRC report or CAA invoice the percentage of their funds they want to claim for the administrative allowance, up to the allowable limit. A utility is allowed to have different administrative allowance percentages for CRC and CAA;
- State auditor or Certified Public Accountant (CPA) review of the utility will be required to verify whether the utility has incurred administrative costs related to the pursuit of conservation that are equal to or greater than the administrative allowance the utility has claimed. See Section 1.8 for more information; and
- BPA will not require documentation directly supporting the administrative allowance amount elected on each invoice. However, documentation that actual administrative costs are equal to or exceed the allowance must be retained for BPA or BPA's representative (state auditor's office or CPA).

### **1.2.2 CRC Administrative Cost Guidelines**

- Utilities with more than 7.5 average megawatts (aMWs) of net requirements load can claim up to 15 percent of their qualifying claims;
- Small utilities with 7.5 aMWs or less of net requirements load can claim up to 30 percent of their qualifying claims;
- Pooling utilities, regardless of total load or the size of individual loads, can only claim a maximum of 15 percent of their qualifying claims, unless the total load of all of the pooling utilities is 7.5 aMW or less, in which case they can claim up to 30 percent of the qualifying claims;
- A qualifying claim is defined as an installed qualifying cost-effective electric conservation measure. Examples that wouldn't qualify for administrative allowances include:
  - Renewables claim;
  - Third Party contract for cost-effective energy conservation, unless specifically approved by BPA as qualifying for administrative cost recovery; or
  - The Northwest Energy Efficiency Alliance (NEEA).

Utilities are allowed discretion on the amount and timing of administrative cost claims during the rate period. However, at the end of the rate period (September 30, 2009) utilities are required to true up their administrative claims to meet both of the following requirements:

- A utility's administrative cost claims cannot exceed the allowable percentage (i.e., 15 percent or 30 percent) of their qualifying claims, as defined above; and
- A utility's administrative cost claims cannot exceed the amount of utility administrative costs that the utility has actually incurred and can document as described in "Section 1.2.4 Allowable Administrative Activities." Utilities are required to document allowable administrative costs via an Agreed Upon Procedures Report as described in "Section 1.8 Agreed Upon Procedures Report for Administrative Activities."

### **1.2.3 CAA Administrative Cost Guidelines**

- A utility's administrative allowance is claimed as a percentage of their invoiced measures reported with each invoice; and
- BPA will pay an administrative allowance of up to 15 percent of the actual accepted invoiced amount. On each invoice submitted, the utility may elect the percentage of administrative allowance for that invoice.

### **1.2.4 Allowable Administrative Activities**

Allowable administrative costs are those costs spent in support of energy conservation activities described in this document. In general terms this can

include costs for staff-related administrative costs, marketing, general energy efficiency awareness building, training, technical assistance costs, evaluations, equipment, and supplies. Each of these categories is described below. This is not an exhaustive list. If utilities have any questions, they can contact BPA for clarification. (See section 1.2.1.)

**Staff Costs:** Staff costs are the actual labor costs used to operate the utility's conservation program, including program planning, design, and implementation, and includes:

- Direct costs incurred for the implementation of CRC or CAA conservation activities, including utility program staff, and sub-contracts;
- Contracted staff support. Support may be required for activities such as data entry for planning, tracking, and reporting systems; administering credits and reimbursement; or for field staff to verify installations or other end use activities;
- Management personnel involved in the supervision of program staff and contractors;
- Administrative support such as secretarial support, contractors, and managers associated with the utility's program-related activities; and
- The utility's conservation-related share of indirect overhead. This can include the utility's cost related to preparing the Agreed Upon Procedures Report.

**Marketing Costs:** The following costs are appropriate:

- Market research, development of advertisements, and promotional materials;
- Production of materials for mass distribution;
- Marketing material distribution costs; and
- Airtime on radio or television in support of cost-effective conservation.

**Other Resources:** Materials, equipment and supplies; training, and other resources required to operate the utility's program. For example:

- Computer hardware;
- Technical equipment (metering equipment, software programs);
- Marketing training and technical training, including certain training for engineers for specific applications and other required technical training; and
- Transportation/travel costs. Travel costs are to be capped at those allowed under the Federal Travel Regulations. (<http://www.gsa.gov/>).

### 1.3 Technical Specifications

BPA's WTP is based on estimated or verified energy savings that will persist over the life of the measure. BPA's WTP and the savings estimates derived from



program evaluations and research projects that are directly related to the standards and quality assurance processes embodied in the programs are listed below. BPA will only accept claims for CRC credit or CAA invoices for measures in compliance with the applicable technical standards described below.

### **1.3.1 Residential**

**Weatherization** - BPA will accept claims for CRC credit or CAA invoices for weatherization of existing electrically-heated single-family, multifamily, and manufactured homes only on the condition that these residences have been retrofitted in compliance with the most recent site-built weatherization specifications or mobile home weatherization specifications, which are available in the PTR, under Downloads.

**ENERGY STAR® Homes Northwest** - BPA will accept claims for CRC credit or CAA invoices for new electrically-heated homes certified to be in compliance with ENERGY STAR Homes Northwest standards by the state certifying organization (SCO). [Information regarding the ENERGY STAR Homes Northwest Program is available at http://www.northwestenergystar.com/](http://www.northwestenergystar.com/). *Note: BPA will not accept CRC claims for credit or CAA invoices for homes built to "TCO #9 – hybrid gas unit heaters with electric resistance zonal heaters."*

**ENERGY STAR Manufactured Homes** (formerly Super Good Cents® for Manufactured Housing or Northwest Energy Efficient Manufactured Housing (NEEM)) - BPA will accept claims for CRC credit or CAA invoices for reimbursement for measures for energy efficiency upgrades to new electrically-heated manufactured homes only on the condition that these residences have been designed, constructed, and certified in compliance with the most recent ENERGY STAR standards.

**Performance Tested Comfort Systems™ (PTCS)** - BPA will accept claims for CRC credit or CAA invoices for reimbursement for PTCS-certified upgrades to electric heating systems including: duct sealing, heat pump installation, and heat pump commissioning. The PTCS specifications are available in the PTR, under Downloads.

PTCS certifications must be from an RTF-recommended and BPA-approved PTCS service provider. The following organizations are currently approved to provide PTCS duct sealing training, PTCS certification, and PTCS quality assurance.

- Oregon Department of Energy. Contact: Brady Peeks (503) 373-7561;
- Washington State University, Energy Program. Contact: Marla Hacklander (509) 477-6703;
- Idaho Department of Water Resources, Energy Division. Contact: Ken Eklund (208) 287-4895; and
- NCAT (Montana) is under consideration to provide PTCS certification services in Montana for existing homes. Contact the CRC or CAA Program Manager for additional information.

Utilities should work directly with the appropriate state energy office to acquire the needed PTCS certification for each measure claimed.

Utilities can also petition the RTF for an exemption from the PTCS third party quality assurance requirements.

**Air Source and Ground Source Heat Pump Specifications** - BPA will accept claims for CRC credit or CAA invoices for reimbursement for the installation of electric heat pumps in residences regardless of the date of construction on the condition that:

- Such residences have had their heat pump installation certified under PTCS specifications. This includes PTCS certified duct systems (where applicable) and PTCS certified controls and commissioning;
- Homes where the duct system is inside the heated envelope of the home (i.e., heated basements) are not required to have the duct systems certified under the PTCS specifications as any heat loss is inside the heated envelope of the home;
- If air-source, the heat pump is installed in accordance with the air source heat pump installation specifications, which are available in the PTR, under Downloads.
- If ground-source, the heat pump is installed in accordance with the geothermal heat pump design and installation standards, which are available in the PTR, under Downloads.

### **1.3.2 Irrigated Agriculture**

**Irrigated Agriculture Specifications** - BPA will accept claims for CRC credit or CAA invoices for reimbursement for verified energy savings of energy efficiency upgrades to new or existing irrigation systems and water management only on the condition these facilities have been designed, constructed, and inspected in substantial compliance with the most recent irrigated agriculture specifications, which are available in the PTR, under Downloads.

### **1.3.3 Renewables**

BPA will accept claims for CRC credit for renewable energy systems that meet the specifications for direct application renewables (i.e., photovoltaic systems and solar water heating systems), which can be found in section 4.

## **1.4 Methods of Determining CRC Credit or CAA Reimbursement Level and General Requirements**

This section is based on BPA's Phase 2 Reimbursement Levels and Strategies document updated April 1, 2007, which is included as attachment A of this document.

BPA will accept reports for the CRC credit and CAA reimbursement that meet the requirement contained in this document. (See section 1.6.)

### 1.4.1 Methods of Determining CRC Credit or CAA Reimbursement Levels

There are two methods to determine the CRC credit and CAA reimbursement level:

- a. **Deemed:** For some measures BPA has deemed the CRC credit or CAA reimbursement level. The deemed credit or reimbursement level was determined by (1) multiplying the RTF's estimate of bus-bar energy savings by a set dollar amount or (2) BPA setting the credit/reimbursement levels for individual measures based on BPA's WTP. This is the case for many of BPA's standard offers;

**Calculated:** For some other measures with a deemed credit/reimbursement, the PTR may require additional calculations to arrive at energy savings. When this occurs, the measure is referred to as "calculated;" but is still a deemed measure; and

**Cost-Effectiveness Test** (for method a): The measure list in the PTR will indicate if a measure is cost-effective. If a measure is not cost-effective, the CRC credit, the High Water Mark (HWM) utility self-funded, or CAA reimbursement is zero and these funding sources cannot be selected for reporting purposes.

- b. **Custom Projects (CP):** These are measures or projects where there is not a deemed method of determining the credit/reimbursement. In these cases the credit/reimbursement is determined by multiplying the accepted, verified energy savings<sup>1</sup> by BPA's WTP. Measures for which this method is used to determine the credit/reimbursement must meet the specification and funding source requirements for certain sectors or other measurement guidelines as applicable; and

**Cost-Effectiveness Test** (for method b): The PTR provides a TRC calculator that is available both in the Help section of the system and in the CP template. This is available for both utility and contractor use to determine if the CP meets the cost-effectiveness requirements.

#### Custom Projects

This section focuses on industrial projects, but custom projects also can be submitted for commercial, residential, and agricultural sector projects.

#### Industrial Sector

Industrial process-related projects include production systems within a particular industry (e.g., pulping in wood products, food processing, plastic extrusion, compressed air, computer chip fabrication, drive systems, drying systems in lumber products, or water and waste water treatment). Process-related projects will involve site-specific calculations (e.g., motors, variable

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<sup>1</sup> Included in the custom project template available in the PTR.

speed drives, pumps, ammonia-based refrigeration, etc.) and will be eligible for credit/reimbursement as part of an integrated approach.

For industrial projects, the utility must choose between the two options noted below. The utility must pick one option and apply it to both its CRC- and CAA-funded activities. These options are designed to allow a utility to seek BPA's technical assistance or to use its own means to address technical needs. They were created with the understanding that some utilities have their own technical support tools and other utilities do not. These options level the playing field and assure that costs and risks are evenly applied across the region.

The utility must make the decision of which option to use up front and for the life of the rate period or other agreement, whichever is longer. Utilities may not be credited/reimbursed at the Option 1 rate for some projects and Option 2 for other projects.

Option 1 is designed to provide technical support for utilities that need such assistance and that do not wish to bear the risk of dry holes. Option 2 is designed for utilities providing technical assistance on their own that are comfortable bearing the risk of dry holes. The credit/reimbursement is more for Option 2, but BPA does not provide these customers with any upstream technical project support.

Utilities that participated in a ConAug Technical Service Proposal (TSP) prior to the early start period of the CAA or CRC are required to claim credits/reimbursements at the Option 1 (\$0.12/kWh) rate for any project in the TSP stream at that time. After signing a CAA or CRC agreement, the utility may choose the administrative credit/reimbursement level (\$0.12 or \$0.15 per kWh) for subsequent projects. The credit/reimbursement is still capped at 70 percent of project costs regardless of the option selected.

### **Option 1**

- The credit/reimbursement level for industrial projects is \$0.12 per kWh (up to 70 percent of the incremental project cost);
- BPA Services: BPA will provide the utility with technical support services for which the utility is not required to reimburse BPA. The technical services may be provided by either BPA employees or a qualified BPA contractor. BPA will determine and provide the best technical staff to meet the utility's need. The current TSP process applies;
- In addition to the TSP process, utilities that select this option may continue to call BPA's utility-dedicated engineer for assistance with their industrial customer loads; and
- The TSP support for which BPA will cover costs includes: most upstream support for project development, including audits, scoping and custom project proposal (CPP) development, and measurement and verification (M&V) plan development. It does not include downstream support such as the implementation of M&V plans or

completion reports. Downstream technical support may be included as part of project costs.

**OR**

### **Option 2**

- The credit/reimbursement level is \$0.15 per kWh (up to 70 percent of the project's incremental project cost);
- BPA does not provide technical support for utilities under this option. BPA will not provide walk through audits, scoping, proposal development, or M&V plan development, and BPA will not provide contractors for such purposes. However, the TSP-qualified BPA contractor list is available for utility use;
- The cost of upstream technical project support, such as audits and technical studies can be included in the total project costs; and
- BPA will review M&V plans for CPPs and make comments and recommendations on submitted CPPs as provided under the CP section.

### **1.4.2 Measure Requirements and Specifications**

This section lists general and sector-specific requirements. Specific measures may have additional requirements, not listed here, in which case the requirements are listed with the measure in the PTR.

#### **General (Applies to all Sectors)**

- In all sectors, including residential, commercial, and agricultural, non-deemed conservation measures can be claimed as a custom project. In order for the measure to be eligible, it must be submitted as a custom project proposal and meet all of the custom project requirements;
- Only cost-effective conservation measures as defined by the Council's Power Plan qualify for a CRC credit or CAA reimbursement. (Section 3.3 of the Pacific Northwest Power and Conservation Planning Act (Act) of 1980 states: "Conservation means any reduction in electric power consumption as a result of increases in efficiency of energy use, production, or distribution." For example, curtailment, fuel switching, or load building activities do not qualify for a CRC credit or CAA reimbursement.);
- All measures presented for CRC credit or CAA reimbursement must be installed in the Pacific Northwest, as defined by the Act, in service areas of participating utilities;
- Measures for which BPA has established a deemed credit or reimbursement level are not eligible as CPPs; and
- Conservation voltage regulation (CVR) projects, customer distribution system efficiency improvements (DSEI), distribution system upgrades for energy efficiency, and new construction or major renovation commercial/industrial construction and multifamily residential must be submitted as CPPs.

## Commercial and Industrial Sectors

- Commercial/industrial projects with less than a 1-year simple payback, based on the estimated energy savings and the estimated project costs do not qualify for credit/reimbursement;
- All new construction/major renovation projects in the commercial/industrial sectors must be submitted as CPPs;
- Commercial and Industrial Lighting credits/reimbursements must use the C&IL Spreadsheet Tool that is available on the PTR System under Downloads. Credit/reimbursement is based on the Standard Offer schedule which is also available on the PTR System. (The measure number is CLI00612, and the latest version of this calculator should be used to claim credit/reimbursement, which is automatically calculated by the tool.);

(Note: Industrial and commercial lighting measures are considered deemed, except when they have interactive effects on other measures, in which case they may be submitted as a CPP under the multiple measures category. One exception is that, after March 1, 2007, for industrial lighting measures that are estimated to provide more than 100,000 kWh in annual savings, the utility has an option of using the custom project approach, recognizing that there is significantly more effort involved to make a custom project proposal, complete with an M&V plan, and the need for a completion report);

- Industrial motor and drive applications must be submitted as CPPs; and
- BPA no longer deems a credit/reimbursement level for motor programs based on deemed hours of operation and assumed loading factors.

## Agriculture

- Pump/motor improvements in the irrigation sector are based on system audits and interactive measure calculations. The reimbursement level is \$0.15 per kWh or 70 percent of project costs. WISA (Waterwise Irrigation Schedule, Ag 123, or its technical equivalent is available in the PTR);
- Motor replacements are assumed to be in lieu of rewinding the motor or at the time of failure;
- Incremental project costs and incremental savings are calculated as the difference between the National Electrical Manufacturers Association (NEMA) standard efficiency motor and the proposed motor for the same size and application;
- Credit/reimbursement for irrigation motor measures requires that the motor is open drip proof (ODP) or totally enclosed fan cooled (TEFC), operates at 1,800 rpm, and is replacing an older rewind motor;
- Motor measures under this section must be installed in an irrigated agriculture application. The motors may be purchased anywhere;

- Motor measures under this section must be new, three-phase AC induction, 5 to 500 horsepower, and NEMA design A, B, or C; and
- Motor measures under this section must meet or exceed the NEMA Premium efficiency standard shown in table R-12 or table R-13 of the Reimbursement Levels and Strategies document dated April 2007 (attachment A).

## **1.5 Custom Project Guidelines and Review Process**

The purpose of this section is to define those measures and projects which require BPA acceptance and review and comment. In general, all measures or projects for which BPA has not deemed a reimbursement level, deemed energy savings, or for which cost effectiveness has not been determined, must be submitted as CPPs. BPA will review and accept, reject, or return for modification, the CPP, and/or the M&V plan.

BPA will also provide additional review and comment on project proposals where estimated energy savings is 200,000 kWh (*This is assumed to be equivalent to a \$30,000 credit/reimbursement level*) or greater. BPA is differentiating between "review and comment" and "M&V approval" in the CRC and CAA and the "Notice to Proceed" process used in ConAug. There is also a difference between the new acceptance process and the C&RD protocol process. BPA review is focused on project success and delivered savings as estimated in the CPP. The purpose of the comment and review procedure is to help utilities and end users design and implement a project that will secure energy savings.

### **1.5.1 Measurement and Verification Acceptance Requirement**

- BPA must accept both the M&V plan of a CPP and the completion report for a CP before a credit/reimbursement can be reported. The CPP must be submitted and accepted before the project is begun. This means the measures have not been purchased (or ordered) or installed before the CPP is accepted by BPA;
- A simple template for submitting CPPs is available in the PTR System. Once submitted to BPA the proposal is "locked" while BPA completes its review. BPA will accept, reject, or return the CPP for modification. Once BPA approves the CPP, the data from the template will be transferred as a measure on the PTR and assigned a measure reference number;
- For assistance in development of an M&V Plan, see Verification Guidelines at: [http://www.bpa.gov/Energy/N/projects/cr\\_discount/pdf/site\\_specific\\_verification.pdf](http://www.bpa.gov/Energy/N/projects/cr_discount/pdf/site_specific_verification.pdf);
- BPA acceptance of the M&V plan included in the CPP is BPA's commitment to pay at the reimbursement amount that is in effect at the time of the approval, regardless of what changes to the program may occur before the M&V is completed, and is limited only by the term of the agreement. This M&V acceptance process may result in some rejected projects if BPA determines the results cannot be reasonably and defensibly measured; and
- A utility may request technical advice from BPA staff regardless of the size of the project or the requirement for review and comment unless they have

selected Option 2 under the industrial credit/reimbursement level section 1.4.1 b.

### **1.5.2 Project Acceptance Requirement**

CPPs are required for the following measures, regardless of any other requirements:

- Conservation Voltage Regulation (CVR);
- Customer Distribution System Efficiency Improvements (DSEI); and
- New construction or major renovations in the commercial, industrial, and multifamily sectors.

BPA must accept both the CPP and the M&V plan for these measures.

### **1.5.3 Reject or Return for Modification**

- BPA may reject a CPP for failure to provide an adequate M&V plan;
- BPA may also reject a CPP submitted for measures noted in section 1.4.2 or for failure to provide an adequate project description; and
- BPA may return a CPP for changes to improve the adequacy of either the project description or M&V plan.

### **1.5.4 Completion report**

- A completion report is required for all CPs;
- A completion report must be submitted when the project is installed and when the M&V plan has been implemented before a utility can claim a CRC credit or submit an invoice for CAA reimbursement. The completion report template, which is similar to the original report, is available on the PTR System. The utility fills out the form and submits it to BPA electronically. This involves entering the actual project costs and verified savings data as determined in accordance with the approved M&V plan. The template will calculate the credit/reimbursement;
- Credit/reimbursement for CPs is based on the accepted completion report data;
- Credit/reimbursement for accepted CP completion report savings is provided in section 1.4.1 b for qualifying cost-effective measures based on the actual savings up to the cost cap, as documented by the pre-approved M&V plan and only after M&V is completed; and
- If the utility's payment to the end user is based on verified energy savings, BPA recommends informing the end user in advance that payment will not occur until after the energy savings have been verified.

### **1.5.5 Review and Comment**

CPPs, for which the expected first year energy savings are over 200,000 kWh (*this is assumed to be equivalent to a \$30,000 credit/reimbursement level*), require BPA review and comment in addition to BPA acceptance of the M&V plan.



- Comment and review: BPA staff will review the CPP submitted by the utility to determine if the submitted project contains any weakness or concerns which would impact the project's ability to deliver the estimated savings, to come in at the estimated project costs, or to impact the ability of the project to be measured and verified. BPA may also identify possible risks related to the implementation of the project and its impact on the technical process. BPA engineers may warn the utility about potential risks and may suggest improvements, but the ultimate decision to proceed with the project will be up to the utility and its consumers;
- BPA reviewers may suggest alternatives to consider, identify potential lost opportunities, and make other suggestions for improvement. The utility is not required to accept BPA's comments or recommendations in full or in part; and
- If, based on BPA's recommendation or comments or for other reasons, the utility changes the substance of the CP, the CP should be resubmitted as a CPP.

### **1.5.6 Project Eligibility**

The utility is required to screen all CPs using the following eligibility requirements prior to submitting the CPP to BPA. These requirements are listed in the CPP template available in the PTR.

#### **Eligibility requirements:**

- Deemed savings or deemed reimbursements are not available for the measures (see section 1.4.1 a);
- The proposed measures have not been purchased or installed;
- The project does not result in fuel switching;
- The measures are designed to result in improvements in the energy efficiency of electricity distribution or use;
- The expected life of the energy savings for each measure is greater than one year;
- The proposed baseline for each measure is documented and provides a basis for establishing energy savings;
- The proposal includes an M&V plan showing how energy savings will be verified;
- The expected project simple payback (Project Cost/Annual Energy Cost Savings) is one year or greater; and
- The expected project benefit/cost ratio (Present Value Total Energy Cost Savings/Present Value Project Cost) is 1.0 or greater, based on data provided by the utility (the CPP template will calculate the project benefit/cost ratio).

## 1.5.7 Project M & V Plans

The purpose of the Measurement & Verification (M&V) Plan is to provide a basis for determining the verified annual energy savings reported for each measure. The minimum requirements for the M&V Plan vary depending on the expected annual energy savings and the project details.

### 1.5.7.1 Standard M&V Plan Requirements

The **Standard M&V Plan** is intended for projects where the expected annual energy savings are 75,000 kWh per year or greater. This level of energy savings has enough value to support a rigorous verification. Typically, this means direct measurement of pre- and post-measure installation energy consumption and other significant variables. Engineering calculations based on simplifying assumptions are usually insufficient for standard projects. Direct metering is not explicitly required for standard projects, but it does set the standard of rigor. At a minimum, the M&V Plan should include the following sections and address the points listed below.

#### Approach

Outline the verification approach to be used and why it was chosen. Detailed guidance for preparing an M&V plan may be found in several standard references:

- The International Performance Measurement & Verification Protocol, available at <http://www.evo-world.org/>;
- The Regional Technical Forum Appendix P Energy Savings Verification; and
- Site Specific Verification Guidelines, May 1992, Bonneville Power Administration, at [http://www.bpa.gov/Energy/N/projects/cr\\_discount/pdf/site\\_specific\\_verification.pdf](http://www.bpa.gov/Energy/N/projects/cr_discount/pdf/site_specific_verification.pdf).

#### Protocols

- ASHRAE Guideline 14-2002, Measurement of Energy and Demand Savings
- Direct measurement of pre-and post-energy consumption and other significant variables is preferred.

#### Assumptions

Explain the assumptions made and state the sources of all assumed values. Show the overall significance of these assumptions to the total expected savings and describe the uncertainty inherent in the assumptions.

Identify the significant variables that affect energy use and categorize each as "assumed" or "to be measured." Assumed values are only acceptable if they have a well-documented basis in fact and an analysis shows that plausible errors from the assumption will not significantly affect the overall reported savings. When using assumed values, conservative assumptions shall be used.

## **Metering Plan**

For metered verifications, include a description of what will be measured, the measurement duration and the data sampling intervals, and the instrumentation to be used. Also, include details on who will perform verification and when it will be performed. If applicable, include a one-line diagram showing proposed metering locations both before and after the installation. Explain how short term measurements will be extrapolated to an annual basis.

If measurement is not possible or practical, provide an explanation.

## **Calculations**

Show or describe the calculations to be used. Include and describe calculations to account for significant changes in production, weather, loads, hours-of-operation, setpoints, manual operation, occupancy, or other factors that affect the annual savings over the expected life of the measure.

## **Quality Assurance**

Describe activities planned to ensure good data and accurate calculations. Describe inspections, tests, commissioning, etc., to ensure that the proposed systems function as planned.

### **1.5.7.2 Lite M&V Plan Requirements**

The **Lite M&V Plan** may be allowed for projects where the expected annual energy savings are less than 75,000 kWh per year, where appropriate. The value of the energy savings for these projects may not be great enough to support direct measurement of savings. If the reviewing engineer does not believe the Lite M&V Plan is appropriate for a project, the Standard M&V Plan may be required. The BPA reviewing engineer may allow the Lite M&V Plan for larger projects (greater than 75,000 kWh per year) where the engineer finds it appropriate. At a minimum, the M&V Plan should include the following sections and address the points listed below.

## **Approach**

The primary method for determining the verified annual energy savings that will be reported for each measure is engineering calculations. The measure(s) installed under this approach should have defensible annual energy savings values that are calculated based on commonly accepted engineering practices and reasonable assumptions.

## **Calculations and Assumptions**

Show or describe the calculations to be used. The engineering calculations should use known variables specific to the project combined with defensible assumptions. Assumptions should be based on independent third party information such as cases studies, prototype testing, metering and

evaluation reports, and/or scientific research. Document the source(s) of all assumptions.

- **Energy Savings Limits**

Since many of the inputs to the engineering calculation are assumed, a best case and worst-case calculation should be made to help determine a reasonable and conservative value for energy savings. For each significant assumption, it is important to determine a realistic error boundary in order to calculate the best and worst-case scenarios. In the best case calculation, all significant assumed variables should be those that are realistic and, when occurring together, provide the highest savings. In the worst-case calculation, the significant variables that provide the least amount of savings expected should be examined. In the worst-case calculation, it is not uncommon to have no savings, or even negative savings. The final estimated energy savings value must be defensible and reasonable.

Since the engineering calculations will vary with the measure application, there is not one specific analysis tool to recommend. The US DOE is one source of potentially useful software calculation tools such as PSAT, FSAT, and MotorMaster. It is recommended to use a Microsoft Office® Excel spreadsheet for engineering calculations as an easy way to document the calculations and assumptions.

### **Quality Assurance**

Describe inspections, tests, commissioning, spot or short-term measurements at the component or system level, etc., to ensure that the proposed systems function as planned. Energy savings values must be adjusted prior to submitting a project completion report if the Quality Assurance tasks reveal the as-built, as-installed, and/or as-operated conditions are significantly different than originally estimated.

#### **1.5.8 Custom Project Processes**

BPA is committed to providing the utility a response within 10 working days of receiving a CPP or a CP completion report. The response will be in writing (i.e., via e-mail or letter). The response may not be acceptance of the report, but may include a return for modification and/or rejection. Return for modification responses can include a notification of errors, missing material, inappropriate baseline assumptions, or missing cost-effectiveness data, or notice of other problems with either the submittal or the M&V plan. If a CPP is returned for modification, it may be resubmitted in which case the 10 working day response time will restart.

#### **1.5.9 Custom Project Proposal Template**

- The utility will fill out and submit the CPP template available on the PTR. The template includes more information than the M&V plan. This additional information is necessary for BPA technical staff to determine if the M&V plan is acceptable. The project information required for acceptance of an M&V plan is outlined on the template;

- BPA will review the submitted CPP for completeness. If the submittal is not complete or needs additional work, the CPP will be returned for modification and the utility will be notified. Modification recommendations will be provided by BPA. This determination is considered a BPA response under the timeline requirements of section 1.5.8. If the CPP was returned for modification, the utility may change the CPP and resubmit it for BPA consideration;
- Once a CPP is determined to be complete, BPA will review the proposed M&V plan. For projects where the expected first year energy savings are more than 200,000 kWh (*This is assumed to be equivalent to a \$30,000 credit/reimbursement level*), BPA will also provide "Review and Comment" on the CPP. The comments will be provided to the utility when the M&V plan is accepted;
- BPA may return or reject the CPP if the M&V plan is inappropriate for the measures to be installed or if the baseline condition is not appropriately estimated. BPA's determination will include notice on the M&V plan deficiencies. This determination is a BPA response; and
- BPA will issue a response when it accepts the CPP. The utility will be notified in writing (i.e., via e-mail or letter). The CPP will receive a reference number from the PTR. This reference number is the tracking number for the CPP and will be tied to the completion report. Only projects with a reference number are eligible to submit a completion report, which is required before a utility can claim a CRC credit or a CAA reimbursement.

## **1.6 Reporting Requirements**

The purpose of these sections is to explain the reporting requirements and reporting services available for the CRC and CAA.

### **1.6.1 Reporting Frequency and Reporting System**

- Utilities are required to use the PTR System at <http://ptr.nwcouncil.org/>, for all reports;
- Two primary reports are required -- monthly and biannual. Quarterly reports and utility internal reports are also available;
- Utilities are required to report their CRC activity at least biannually. CRC reports are due no later than:
  1. Beginning October 1, 2006, CRC participants will submit a report by April 30 for the period October 1 to March 31 for each year during the rate period;
  2. Beginning October 1, 2006, CRC participants will submit a report by October 31 for the period April 1 to September 30 for each year during the rate period; and
- Utilities are required to report their activities for CAA reimbursement. The report serves as the invoice for the purposes of CAA. The utility can submit invoices/reports as often as monthly. The annual reports

submitted to BPA can include CAA activities, but will not serve as a report for invoicing purposes.

### 1.6.2 Reporting Schedule and Other Important Dates

<b>Date</b>	<b>Description of Activity</b>
11/9/05	CAA are available
2/15/06	CRC Early Start begins
7/15/06	Customer proposed renewables claims for FY 2007 are due
9/30/06	CRC Early Start period ends
<b>10/1/06</b>	<b>CRC, CAA, and Rate Period officially start</b>
10/31/06	CRC Early Start reports are due
4/30/07	1st bi-annual CRC reports for FY 2007 are due for October 1 to March 31
7/15/07	Customer proposed renewables for FY 2008 are due
10/31/07	2nd bi-annual CRC reports for FY 2007 are due for April 1 to September 30
4/30/08	1st bi-annual CRC reports for FY 2008 are due for October 1 to March 31
7/15/08	Customer proposed renewables for FY 2009 is due
10/31/08	2nd bi-annual CRC reports for FY 2008 are due for April 1 to September 30
4/30/09	1st bi-annual CRC reports for FY 2009 are due for October 1 to March 31
9/30/09	Year three of the CRC/Rate Period ends (October 1, 2006, to September 30, 2009)
10/31/09	2nd bi-annual CRC reports for FY 2009 are due for April 1 to September 30
11/30/09	Final reconciliation report due from participating utilities. Program participants' agreed upon procedures reports on the certification and balances for FY 2009 are due.
12/31/09	Revised final reconciliation report and reimbursement from utilities whose qualifying activities/expenditures do not equal or exceed their cumulative CRC amount. Program participants' agreed upon procedures reports, on the certification and balances for FY 2009 are due.

### 1.6.3 Reporting Requirements

#### General for CRC and CAA

This section defines how utilities submit reports to claim CRC credits or to request CAA reimbursement.

When submitting a report for credit/reimbursement, the utility must use the PTR System. The PTR will guide the utility through the submittal requirements, which include:

- Confirmation that the utility implemented the items for which they are claiming CRC credit or CAA reimbursement in compliance with the directions, requirements, and procedures documented in the Implementation Manual and in applicable contracts; and
- The utility will identify the percentage of administrative allowance they are claiming for the reported items. All CRC claims are limited by the utility's total CRC eligibility, which is based on the customer's Net Requirements Forecast. All CAA claims are limited by the CAA contract.

BPA will not credit/reimburse for measures not reported in the PTR System.

BPA will, as part of its review process, ensure that the credit/reimbursement report is reasonable and corresponds with any and all attachments.

The report submitted to BPA should include, through attachment or referenced e-mail, supporting documentation that may be required for any Standard Offer or CP.

Supporting documentation must include unique identification information. For CRC, this is the reporting period information. For CAA this is the invoice number from the report. The unique identification information should also be kept with the utility files for all supporting documentation which is not submitted with the report, but which is required to substantiate the reports.

The PTR will track the CRC credit balance and the CAA contract balances as reports are filed. BPA will make this information available to the utility as part of the reporting process.

#### **1.6.4 Other Utility Funded Conservation**

Utilities are encouraged to report conservation activity funded by sources other than BPA using the PTR. The system will accommodate other funding sources. These items can be included in the biannual reports, but should not be included in any CAA monthly report.

### **1.7 Oversight, Verification, Records, Audits, and Evaluations**

#### **1.7.1 Oversight and Verification**

- BPA or BPA's agent will conduct inspections of all report records and monitor or review the utility's procedures, records, verified energy savings methods and results, or otherwise oversee the implementation of the activities implemented under the initiatives covered by this document. The number, timing, and extent of such inspections shall be at the discretion of BPA, but will be coordinated with the utility. BPA will provide written notice not less than 30 days prior to such an inspection. These inspections shall occur at BPA's expense; and

- BPA may contact appropriate federal, state, or local jurisdictions regarding environmental, health, or safety matters related to any activity or measure/unit/project credited or reimbursed under the CRC or CAA.

### **1.7.2 Records and Audits**

- Each utility shall establish files and maintain supporting documents and records for each submitted report for each and every item listed including administrative costs. The files for all reports shall be clearly designated as BPA credit/reimbursement files. The records shall be sufficient to document that the item reported is accurate and can be substantiated to meet the BPA's due diligence in the spending or crediting of federal funds;
- Utilities shall keep program report records for no less than three years after the term of the current rate case or through 2012, whichever is later; and
- Financial audits shall be in compliance with the audit standards established by the Comptroller General of the United States.

### **1.7.3 Evaluations**

Evaluations are needed to determine barriers to program success, identify ways to improve programs, help track program accomplishments, assess market conditions, determine the accuracy of savings estimates, and to answer the ultimate question of whether programs are meeting their expected goals.

- BPA may conduct, and the utility shall cooperate with, evaluations of conservation impacts and project implementation processes to assess the amount, cost effectiveness, and reliability of conservation in the utility's service area or region. After consultation with the participating utility, BPA shall determine the timing, frequency, and type of such evaluations;
- BPA anticipates that many of the evaluations will be done collaboratively with other organizations to share costs and to improve the usefulness of the evaluations. In some cases, the evaluation will be managed by another party on behalf of BPA and others;
- BPA will determine the specific requirements for evaluations with consideration for the schedules and reasonable needs of the utility and the utility's customers; and
- Any evaluation of the project initiated by BPA shall be conducted at BPA's expense or shared regional expense, and such costs shall be excluded from the implementation budget. Utilities or other entities that cooperate with the evaluation are recognized as providing some resource/cost, but the cost will not be considered for direct reimbursement by BPA, except under unusual circumstances. Cooperation with the evaluation is a cost of the partnership in delivering the programs.

## **1.8 Agreed Upon Procedures Report for Administrative Activities**

For both the CRC and CAA, BPA requires that utility costs for administrative activities be verified by a certified public accounting (CPA) firm or state auditor.



This is to assure that the information submitted to BPA in applications and reports is supported by adequate documentation and accounting records. Such documentation and records are to be maintained in accordance with the participant's policies and procedures.

It is BPA's objective to keep the cost of performing the work, outlined below, to the minimum possible. To keep these costs low, BPA expects program participants to negotiate relatively low cost "agreed-upon procedures" work with their CPA firms/auditors whenever possible.

"Agreed-Upon Procedures" is a specific technical term that has specific meaning to auditors and accountants. The American Institute of Certified Public Accountants (AICPA) Statements on Standards for Attestation Engagements No. 10 provides guidance for performing agreed-upon procedures engagements, including an illustrative report.

This section does not suggest that an agreement be made between BPA and the utility on the nature of the agreed-upon procedures. It is BPA's intent that the customer should agree upon the procedures with their CPA firm/auditor.

Annual reports from the state auditor or the CPA shall include the following:

- The name of the utility;
- The time period covered by the report (i.e., beginning and end dates);
- The amount of costs incurred for allowed administrative activities (as described in section 1.2) for both CAA and CRC and whether these amounts are equal to or more than the administrative allowances that the utility has claimed for credit or reimbursement. CAA and CRC costs should be accounted for separately;
- A description of and results of tests that were performed to review the administrative costs for allowability; and
- A statement that the customer has appropriate policies and procedures, and an accounting system that is capable of tracking CRC and CAA programs.

Sample CPA firm/auditor statement language:

"The auditor of record has determined that the utility has sufficient records to indicate that the utility's costs, either direct, indirect or overhead, are equal to or exceed the amount of administrative allowance claimed through its agreements with BPA."

*The required state audit or CPA audits of the utility must address whether the utility has documented administrative costs related to the pursuit of conservation. BPA will not duplicate that external review.*

Utilities who are not familiar with running energy conservation programs or who did not participate in BPA's C&RD program are encouraged to discuss with their CPA firm/auditor the following:

- Can the utility define what basis and related documentation will be used to support the reporting elements for either the CRC or CAA program; and
- Does the utility have policies and procedures and an accounting system in place capable of tracking the elements described above?
- An Agreed Upon Procedures Report is required if a customer:
  - Has a CAA contract, or
  - Claims administrative costs under the CRC.
- An Agreed Upon Procedures Report is not required if a customer:
  - Does not file a CRC report, and
  - Does not have a CAA contract in place.
- *Note: An Agreed Upon Procedures Report is not required if customers only claim donations to NEEA, or for a purchase of Environmentally Preferred Power (EPP) or other renewables.*

### **1.8.1 Administrative Costs**

As stated above, the CPA or auditors' report must address whether the utility has documented administrative costs related to the pursuit of conservation activities equal to or in excess of the actual administrative allowance that is claimed against the CRC and CAA. If the utility's documented administrative costs are less than what the utility has claimed in their CRC reports or CAA invoices, the utility will be required to correct their CRC report to account for the change or to reimburse BPA in the case of the CAA.

### **1.8.2 Frequency**

The report is due annually (or for utilities under 7.5 aMW, once during each rate period).

### **1.8.3 BPA's Right to Audit**

BPA shall have the right to review the customer's CRC or CAA records at any time, with 30 days notice. Any such effort will be undertaken at BPA's expense. BPA is not allowed to waive this right, but will not generally exercise the right unless there is suspicion of waste, fraud, or abuse.

## **1.9 Records Management**

- CRC and CAA records must be organized and maintained in such a manner that pertinent records can be found when needed; and
- CRC and CAA records must be maintained for potential audit purposes for at least three years after the end of the CRC Program (September 30, 2012).

### **1.10 Program Changes**

BPA reserves the right to make changes to the CRC and CAA with six months notice, or as required (see attachment C). This includes, but is not limited to, changes to:

- Program requirements;
- Conservation measure credit or reimbursement levels;
- Conservation measure applications;
- Technical specifications; and
- Reporting requirements.

BPA will strive to limit the number, scope, and nature of any changes. However, changes may be required to ensure the CRC and CAA meet the intended goals as defined in the Post-2006 Conservation Program Structure document (attachment D) and operate as intended under this document.

### **1.11 Official Interpretations**

Only BPA's CRC Manager, CAA Manager, or Energy Efficiency Implementation Manager may issue interpretations, determinations, and findings related to the CRC or CAA that are binding and/or have implications across the program, unless delegated to other BPA staff (i.e., COTRs). Such decisions shall be provided to the utility in writing. Only written statements (including e-mail) by BPA officials acting within the scope of their authority in administering the CRC and the CAA shall be considered to be official BPA statements.

### **1.12 Regional Technical Forum**

In 1996, Congress directed BPA and the Council to convene a Regional Technical Forum to develop standardized protocols for verifying and evaluating conservation savings. Congress further recommended that the RTF's membership include individuals with technical expertise in conservation program planning, implementation, and evaluation, and that its services be made available to all utilities in the Northwest.

The Comprehensive Review of the Northwest Energy System (Comprehensive Review) supported the Congressional directives and recommended that the RTF should, in addition, track conservation and renewable resource goals and provide feedback and suggestions for improving the effectiveness of conservation and renewable resource development programs in the region. The Comprehensive Review also recommended that the RTF conduct reviews of the region's progress toward meeting its conservation and renewable resource goals at least every five years and communicate recommended changes to appropriate decision-makers. These periodic reviews are to acknowledge changes in the market and to adjust targets appropriately.

The RTF was established as a standing advisory committee in 1999 to provide technical peer review and advice to the Council and BPA. Members of the RTF are selected by the Council based on their expertise and experience. The RTF consists of individuals drawn from utilities, the private sector, BPA, public interest

groups, state and local government, and academic and national laboratory personnel. The RTF is funded from the Council's budget with possible augmentation from state public purpose funds and/or individual utilities that would use the RTF's services but that do not contribute proportionately to the Council's funding.

#### **1.12.1 Role of the RTF**

- The RTF collects, reviews, and distributes protocols for the verification, evaluation, and development of new methods of achieving conservation savings;
- Regional Conservation Tracking:
  - The RTF has developed standardized forms and data definitions for use by retail electricity distribution utilities, state and local low-income weatherization service providers, and renewable resource developers; and
  - The RTF compiles data submitted and publishes an annual regional summary, which it presents to the Council. This summary compares the level of activity and expenditures reported with the Comprehensive Review's "public purpose" goals. In addition, the RTF assesses what has been accomplished through those expenditures - electricity savings achieved, low-income consumers served, renewable resource production achieved - and at what cost.

Specifically, the RTF is called upon to make recommendations to BPA regarding:

- Cost-effective conservation measures and estimated savings associated with those measures;
- Changes in technology and standard practices through which utilities can demonstrate that different savings and value estimates should apply;
- A set of protocols by which the savings and system value of measures/programs not on the list could be estimated including complex commercial or industrial projects;
- Criteria for renewable resource projects; and
- Protocols for measurement and evaluation of savings or production.

#### **1.12.2 Relationship to BPA**

The RTF is independent of BPA. The RTF's recommendations to BPA are for advisory purposes only and reflect the legal requirement that decisions affecting BPA's rates must ultimately be made by BPA. Consequently, BPA will decide whether to accept, reject, or modify the recommendations of the RTF.

#### **1.12.3 Skills**

The RTF's responsibilities are primarily technical. Its members collectively bring technical experience and expertise in the analysis of conservation and renewable resources and the design of conservation and renewable resource projects and

programs, their implementation and their evaluation. Members of the RTF are required to have expertise in particular areas of energy conservation implementation (e.g., commercial buildings, industrial processes, residential, renewable resources, etc.).

#### **1.12.4 The RTF's Role in the CRC and CAA**

Utilities may petition the RTF to review the eligibility of new measures or measures previously deemed as not regionally cost-effective. If the RTF recommends a proposed measure as cost-effective, BPA will review the RTF's recommendations to determine whether or not BPA will pay an incentive for the measure.

#### **1.12.5 Process for Petitioning the RTF**

**Initiation of Process** - Parties may initiate the process by contacting the Chair of the RTF via letter or e-mail. The party making the proposal should explain the change proposed. If a new measure is proposed, the proposal should cite the RTF criteria under which the measure qualifies for inclusion in the RTF's list. If a change in evaluation methodology is proposed, the proposal should include the rationale for the change. For example, in the case of a proposed change in protocol, the proposal should explain why the change would improve the analytical quality of the protocol. In the case of a proposed changed assumption, the proposal should present evidence that the changed assumption more closely reflects the real world. A standard form is available on the RTF Web site, which sets forth the minimum level of information needed to file the proposal.

RTF staff will first assess the completeness of the proposal. If the proposal includes all necessary information, the staff will assess the validity of supporting arguments and evidence and make a recommendation to the RTF as to its acceptance or rejection. RTF members will receive copies of all information provided by the appealing party in support of their proposal.

If the staff assessment is that the proposal should be accepted, or that the proposal is sufficient to merit more discussion by the RTF, the proposal will be put on the agenda for discussion at the next RTF meeting. If the staff assessment is that the proposal has no merit, staff will assign the proposal to a consent agenda for rejection. If any RTF member disagrees with the assignment, it will be moved from the consent agenda to a place on the discussion agenda.

The RTF anticipates that it will normally be able to make decisions on proposals within 90 days of receiving them, although complex issues could take longer and some circumstances (e.g., health and safety) could warrant more immediate action. Notice of pending actions on matters under appeal will be provided in the RTF meeting announcements and agendas. Figure 1, below, depicts the flow of a proposal through the RTF's process.

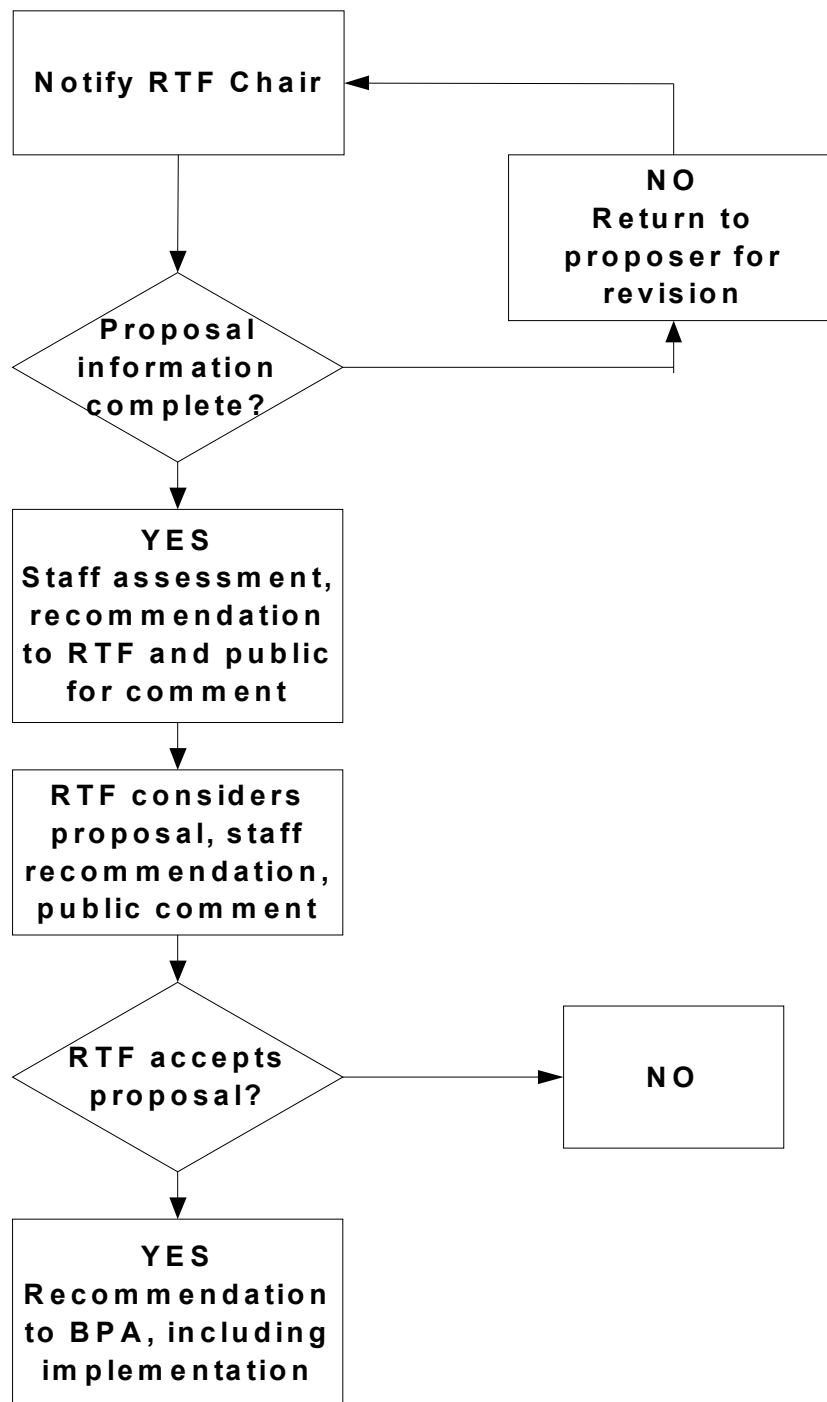
The RTF will consider the proposal, staff's assessment and recommendation, and any public comment and accept or reject the proposal. Acceptance or rejection will require a 60 percent vote by the RTF. The party making the proposal may make a presentation directly to the RTF and may contact individual RTF members

prior to the meeting. Members are obligated to disclose such contacts when the proposal is under considered.

**Transmittal of Recommendations to BPA** - Accepted proposals will be submitted in writing to BPA as RTF recommendations with advice for implementing the changes.

**BPA Approval** - BPA will respond within 30 days of the RTF recommendation, either by approving the request, denying the request, or by requesting more information. For more complex requests, BPA may need more time, but will respond with a proposed course of action and completion date within 30 days of the RTF recommendation.

**Figure 1 - Process Flowchart**



**After BPA receives the RTF’s recommendation, BPA will make a determination within 30 days, to approve the request, deny the request, or to request additional information.**

## **2.0 Conservation Rate Credit**

This section provides an overview of elements specific to the CRC. Features that are the same for both the CRC and CAA are described in section 1 of this manual, or are included in the attachments as applicable to both CRC and CAA.

### **2.1 General Overview of the Conservation Rate Credit**

- The CRC is available to BPA's Priority Firm Power (PF), Industrial Power (IP), and New Resource Firm Power (NR) customers that take action to achieve cost-effective conservation and renewable resource development in the region. In addition, investor owned utility (IOU) Residential Exchange benefits qualify under the same terms and conditions as the PF, IP, and NR rates;
- Each utility will be eligible for a CRC set at 0.5 mills per kWh applied to its PF, IP, and NR purchases. The rate credit is included in the posted rates for Subscription Power Purchases. The 0.5 mill/kWh rate credit will be incorporated into the IOU calculation of settlement benefits consistent with the IOU settlement contracts;
- Individual participants in the CRC are obligated to make investments in cost-effective conservation and renewable resource development in the region to earn credits/reimbursements equal to their purchases times 0.5 mills/kWh;
- BPA will determine and make available on the PTR System information about eligible measures and specific activities that can be implemented to satisfy customer credit obligations; and
- The PTR System will provide the specific dollar amount of eligibility contributed by each measure or provide a means for calculating such an amount.

### **2.2 Calculation of the Conservation Rate Credit**

The CRC applies to the following rate schedules, contracts, and settlement benefits:

- Priority Firm Power (PF-07) rate schedule;
- New Resource Firm Power (NR-07) rate schedule;
- Industrial Power (IP-07) rate schedule; and
- Slice rate exhibit.

Benefits provided as a cash payment in settlement of the Residential Exchange Program will also be eligible for the CRC, subject to the terms of such settlement.

### **2.3 Sources of CRC Qualifying Load Data**

- For Block purchases and Full or Partial Requirements customers, BPA will use the monthly average, rounded to the nearest whole dollar, of the projected eligible purchases for October 1, 2006, through



September 30, 2009, from the BPA fiscal year<sup>2</sup> 2006 Wholesale Power Rate Case Sales Forecast;

- For Slice purchases, BPA will use the Slice Initial Critical Inventory Amount (7,070 average megawatts) to determine the average monthly load, rounded to the nearest whole dollar; and
- For IOU Residential Exchange customers, BPA will provide the CRC according to the terms of their current settlement contracts.

#### **2.4 Calculation and Applications of the Monthly Rate Credit**

- BPA will determine the annual amount of the annual rate credit using the following formula:

The annual rate credit = monthly rate credit X 12;

- The monthly rate credit will be reflected as a deduction on the customer's monthly total power bill;
- The rate credit will be applied after BPA has determined all other charges and credits on the participating customer's power bill; and
- BPA will provide the rate credit even in those months when the rate credit amount is larger than the customer's total power bill amount.

#### **2.5 Incremental Spending**

Only conservation and renewables activities or spending that exceeds what the utility or customer is required by law or regulatory requirements to accomplish will qualify.

#### **2.6 Utilities Choosing to Participate in the CRC**

- Customers with an existing Subscription Contract will be offered a revised Exhibit B pertaining to the Conservation Rate Credit.
- Customers without an existing Subscription Contract will be offered the CRC as part of their 2007-2009 Subscription Contract.
- Customers are required to sign Exhibit B before the Conservation Rate Credit will be applied to their power bill during the 2007-2009 Rate Period. If the customer does not sign the revised Exhibit B, they will be charged the higher rate.

#### **2.7 Utilities Choosing Not to Participate in the CRC**

A utility may elect to discontinue participating in the CRC any time during the rate period. If a customer decides that they want to discontinue receiving the CRC on their power bill, they can notify BPA, in writing, and BPA will remove the CRC from the customer's future power bills. At that point, the customer will be required to submit a Final Reconciliation Report as described in section 2.12.

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<sup>2</sup> BPA's fiscal year runs from October 1 through September 30.

## 2.8 Rules for Pooling Organizations

Forming pooling organizations to implement cost-effective conservation is a contractual relationship among the pooling members. BPA will not monitor contractual relationships or activities of pooling organizations.

### General Requirements

- Pooling utilities, regardless of the size of individual loads, can only claim a maximum of 15 percent of their qualifying budget, unless the total load of all of the pooling utilities is 7.5 aMW or less, in which case they can claim up to 30 percent of the qualifying budget;
- Pooling utilities are responsible for reporting their individual conservation costs and savings for determining their CRC. Utilities in the pool can assign this responsibility to the pooling organization, but are still responsible for what the pool reports on their behalf. In the case of renewables, the utility would report the CRC allocated by the pool based on the output of the qualified renewable resource;
- The pooling organization shall provide a summary report to BPA on a semi-annual basis documenting the conservation costs and savings reported by each participant. The savings and CRC for both conservation and renewables would be allocated and determined by the pool. Double counting of credits is not permitted;
- A customer may put all or a portion of its CRC toward a pool and withdraw under the terms and conditions agreed to by the pool, not under terms specified by BPA. Pool membership can expand or contract as determined by the pool;
- Trading of the CRC would be allowed within the pool. This would allow a member to capture an amount above its CRC as determined by the 0.5 mill cap, by utilizing another pool member's unused CRC; and
- Pooled utilities whose total load is 7.5 aMW or less will not have their proposed renewables claim prorated in the event that renewables exceed \$6 million; renewables claims of pooled utilities whose total load is more than 7.5 aMW will be prorated if renewables exceed \$6 million.

## 2.9 Low-Income Weatherization

Utilities can provide funds to state/LIWSP/tribal organizations and receive credit on a dollar-for-dollar basis, with the exception of Prime Window Replacements for the purpose of low-income weatherization. Or utilities can run their own low-income weatherization program and will be credited on the same dollar-for-dollar basis as contributions to LIWSPs. The following conditions apply:

- CRC funds can only be used to install eligible measures, in electrically-heated homes in the utility's service territory. Eligible measures are those that the RTF has defined as Total Resource Cost (TRC) cost-effective and have been approved by BPA. The CRC has a defined list of eligible measures that might be different than the list of eligible

measures defined by DOE's Savings to Investment Ratio (SIR) method. The eligible measures list is found in attachments A and B;

- Prime window replacements are an eligible measure, but do not qualify for the dollar-for-dollar credit (see lists in attachments A and B). The credit for TRC cost-effective low-income prime window replacement is capped at \$0.30 per kWh saved;
- CRC funds cannot be used to do repair work needed to install cost-effective weatherization measures;
- Utilities and LIWSPs should expect the same level of oversight and diligence from BPA on low-income weatherization claims as they would expect for other reported activity in the CRC;
- Low-income activity qualifies for an administrative allowance, regardless of whether a customer provides funds to a LIWSP or runs its own program;
- Utilities choosing to run their own low-income weatherization program should be in substantial compliance with programs currently funded by BPA grants for the U.S. Department of Energy Low-Income Weatherization Program requirements;
- Eligible measures will be reported in the PTR System. The customer will be required to enter the square footage data on a measure basis. Data on a house-by-house basis is not required in the PTR System; however, house-by-house data must be maintained in utility records;
- Customers need to provide an appropriate level of oversight to ensure that CRC funds provided to LIWSPs are used only to install eligible measures;
- Utilities should have a written agreement with the LIWSP outlining terms and conditions, and reporting requirements; and
- CRC funds and BPA funds provided to state/LIWSP/tribal organizations cannot be co-mingled and must be used for separate activities or projects.

Note: Under a separate BPA program, BPA will directly fund low-income weatherization through the existing state/Community Action Partnership (CAP) agency/tribal infrastructure at a level of up to \$5 million per year for the 2007 to 2009 Rate Period, which began October 1, 2006.

## **2.10 Contributions to Organizations Implementing Cost-Effective Conservation**

Contributions to third party providers such as NEEA will qualify for full CRC dollar-for-dollar credit, provided that they install cost-effective conservation measures and meet all applicable requirements for measures claimed for the CRC. Such contributions do not qualify for an administrative allowance.

## **2.11 Performance Reviews and Remedies**

- Utilities will report bi-annually to BPA via the PTR System;
- If, at the end of the first full year of the program (October 1, 2007), the utility is not meeting its targets (i.e., the utility is claiming 50 percent or less of the rate credit received by the end of the first year of the rate period), the utility must prepare and have BPA approve an action plan by April 1, 2008, that provides sufficient proof of achievable intent by the end of the rate period;
- BPA staff will be available to assist utilities in developing an action plan that will indicate how the utility will spend its CRC funds by the end of the rate period (September 30, 2009);
- BPA's goal is for every participating utility to spend the full amount of its CRC on qualified conservation and/or renewables activities by the end of the rate period. If at the end of the 18-month period (third progress report -- April 1, 2008) participants still have not made sufficient progress on their CRC spending (i.e., the utility has spent 75 percent or less of the rate credit received by the end of the first 18 months of the rate period), BPA may send a notification letter that the CRC will be withdrawn for the third year of the program. Such customers will be required to pay the full PF or other appropriate power rate so the CRC funds can be reallocated; and
- At the end of the third year of the CRC program (September 30, 2009), there will be a final true up required for participating utilities.

## **2.12 Final Reconciliation Process**

After the end of the third year of the CRC program (September 30, 2009), there will be a final true up required for participating utilities.

### **Requirements**

- All required electronic reports have been submitted;
- All required paper work has been completed and is on file with BPA's CRC Program Manager. This includes:
  1. Signed hard copies of the bi-annual electronic CRC reports, electronic signature proxies (/s/) will qualify as a signed copy, and
  2. Acceptable Agreed Upon Procedures reports (see CPA/audit requirements in section 1.8).

### **Process for Final Reconciliation of CRC**

- Customers can request, in writing, that BPA start the close-out and true-up process to determine if they have satisfied their CRC program obligations. Otherwise, BPA will start the process as soon as practical after September 30, 2009;

- BPA will review the customer's CRC file and will determine if all of the requirements have been met. The customer will be notified of any deficiencies and asked to submit the required documentation; and
- Once BPA is satisfied that the customer has met all of the CRC program requirements, BPA will notify the customer in writing.

### **Agreed Upon Procedures Reports**

Customers must have submitted an agreed upon procedures report, per section 1.8, for each of the years that CRC claims are made. If there are missing reports or if the existing reports do not adequately document the time period being covered, the tests that were made, and the results of those tests, utilities are encouraged to have their state auditor or CPA firm conduct a close-out review covering the entire time period when CRC claims were made.

## **3.0 Conservation Acquisition Agreement**

This section provides an overview of elements that are specific to the Conservation Acquisition Agreement (CAA). Features which are the same for both the CAA and the Conservation Rate Credit are described in section 1. Utilities should notify their Energy Efficiency Representative to indicate interest in participating in the CAA.

### **3.1 Procedure for Establishing a Conservation Acquisition Agreement**

#### **3.1.1 Establishing a New Agreement**

To initiate a customer-specific CAA agreement, customers should submit a proposal to their EER that includes the measures, metering and savings verification method to be used, sector-specific reimbursement rate for those measures, estimated installation cost, total implementation budget amount, and the proposed delivery approach. BPA will review the proposal submitted, may ask clarifying questions and, if acceptable for purchase, negotiate final terms for the agreement.

For standardized offers, customers request a CAA, the specific standard offer, and an implementation budget amount. The implementation budget amount requested should estimate the expected expenditures for the service area for the term of the agreement. This request may be made to the EER directly.

BPA will review the request submitted and, if the request is accepted, develop a draft CAA. Generally, BPA will provide a draft CAA to the customer for review. Once the CAA is in final form, two originals will be sent to the customer with a request that both be signed and one original be returned to BPA.

### **3.2 Conservation Acquisition Agreement Structure**

#### **3.2.1 Contract Body and Exhibit**

The structure of the CAA contains terms and conditions applicable to the overall purchase of energy savings. The exhibit provides terms and conditions specific to measures or outlines processes and conditions that must be met in order to receive reimbursement from BPA.

#### **3.2.2 Standard Offers**

BPA's initial set of standardized offers includes the Commercial and Industrial Lighting Offer (C&ILO), Commercial and Industrial Standard Offer (C&ISO), Irrigated Agriculture Standard Offer (AgSO), and a comprehensive Residential Standard Offer (ResSO). BPA's reimbursement amounts for these standard offers are detailed in the Post-2006 Conservation Program Reimbursement Strategies and Levels document (April 2007 or subsequent edition). The term of BPA's standard offers is through September 30, 2007. BPA plans to develop follow on offers for customers that will take effect October 1, 2007.

### **3.2.3 Customer-Specific Agreements**

Customers may request customized terms and conditions suitable to their service area. BPA will consider such requests and any customized purchase will be made by BPA within the parameters of the Post-2006 Program Structure (attachment D). This includes the parameters established in the Reimbursement Strategies and Levels document (attachment A).

### **3.2.4 Change in Requirements for Standard Offers & Negotiated Agreements**

BPA will make changes to the structure of the CAA or the Exhibit(s) with six months notice. Generally, changes will be made by notice and will be associated with changes made to this manual.

## **3.3 Changes to Implementation Budget Amounts**

### **3.3.1 Periodic Reviews by BPA**

BPA reserves the right to review actual budget expenditures relative to the initial implementation budget amount and the period of time remaining during the term of the agreement. BPA, working with the customer, may review the actual expenditure rate and lower the implementation budget amount if the budget provided in the agreement cannot be fully utilized during the term of the agreement. BPA will take into account projects that are in process and have a reasonable chance of being completed as part of working with the customer to make this decision.

### **3.3.2 Requests for Additional Budget Amounts**

Customers may at any time during the agreement request additional budget for standardized offers and custom agreements. BPA will review such requests, taking into account actual expenditures, projects in process, and potential new projects, and may add budget to projects in the CAA.

Requests for additional budget should be sent to the customer's EER in writing, should identify the standard offer or custom project for the addition of the funds, and should include information on actual or potential projects supporting the increase in funding. If the request is approved by BPA, BPA will send the customer a letter increasing the budget amount.

## 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).

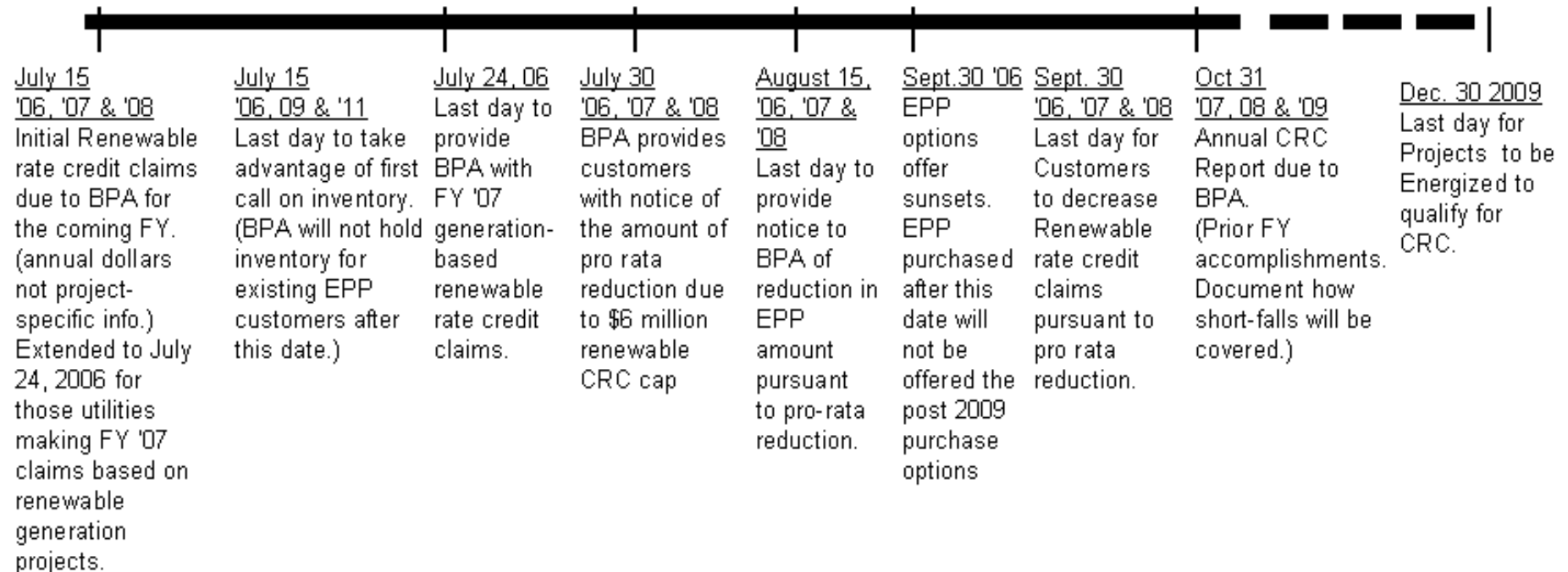
**RECs**

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





## **5.0: Attachments**

**Attachment A: Reimbursement Strategies and Levels (4/1/07)**

**Attachment B: Low-Income Measure Lists**

**Attachment C: Fundamental Requirements Related to Federal Due Diligence**

**Attachment D: Final Post-2006 Conservation Structure (6/28/05)**

**Attachment A: Reimbursement Strategies and Levels**

**Post-2006 Conservation Program**

# **Reimbursement Strategies and Levels**

**Energy Efficiency**

**Bonneville Power Administration**

**April 2007**



## Executive Summary

This document represents BPA's manual for Post-2006 initiatives based on the 2005 – 2006 Utility Sounding Board process regarding reimbursement strategies and levels for BPA's Post-2006 conservation programs, and the year of experience of the early starters in the 2007 programs. This document is the core element of the Implementation Manual for the new programs and detailed bilateral contract terms and conditions.

### The Guiding Principles:

1. BPA's agreements (CRC and CAA) are between the utility and BPA, not between the consumer and BPA. The utilities will design and run programs, and BPA will design reimbursement rules and levels for the utilities. For that reason, BPA refers to its payments to utilities as credits or reimbursements, not "incentives" or "rebates;"
2. BPA's decision to pay for achieved and measured conservation at set levels of reimbursement (deemed reimbursement, or cents per kWh up to a cap) allows utilities to determine how to design and operate their own programs to deliver the savings. This reflects two of BPA's principles of local control and accounting simplicity;
3. Almost all options available under the CAA will be part of the CRC and *vice versa* as BPA lines up the offering to be consistent;
4. Administrative allowances of up to 15 percent are allowed (or 30 percent under the CRC for utilities with loads of 7.5 aMW or less) on qualifying measures;
5. Calculated credits or reimbursements will be offered by BPA based on the busbar savings; thus, BPA is providing credit/reimbursement for reduced line losses;
6. Savings from both the CRC and the CAA must be reported in the Regional Technical Forum (RTF) Planning, Tracking, and Reporting (PTR) System;
7. Where appropriate, BPA will group similar measures and provide an average reimbursement level to replace long lists of similar measures in the PTR System. For example, the C&IL list of measures and reimbursements for lighting replaces 6,200 separate lighting measures in the RTF database;
8. If there is a deemed reimbursement level for a particular measure, only that deemed reimbursement level will be provided by BPA. There will not be an option to substitute calculated savings or another deemed savings from the RTF list;
9. For industrial projects, customers may choose at the time they sign their first agreement (either the CRC or CAA) to either accept 15 cents/kWh up to 70 percent of project costs (including technical services) and handle or pay for all technical services/audits on their own, or to accept

12 cents/kWh up to 70 percent of project costs and have BPA arrange for technical services/audits;

10. Cross Cutting Features: The following features will be consistent across all sectors (residential, commercial, industrial, agricultural and other sectors):
  - Custom projects can be proposed in any sector: residential, commercial, industrial, agricultural or other. All custom projects (projects for which reimbursement is based on verified savings) require BPA approval of a measurement and verification (M&V) plan. Standardized M&V protocols will be provided for some common measures. Custom projects of less than 75,000 kWh/per year are eligible for "M&V Lite," an approach by which BPA engineers can approve less costly M&V approaches;
  - M&V plans must be approved by BPA prior to any project implementation activity such as equipment purchase;
  - Projects with a BPA credit/reimbursement level of \$30,000 or higher must be submitted to BPA, prior to any project implementation activity such as equipment purchase, for review and comment. However, the ultimate decision to proceed with the project will be up to the utility and its consumers;
  - All new commercial, industrial, agricultural, construction/major renovation, conservation voltage regulation (CVR) and distribution system efficiency improvement (DSEI) projects must be submitted to BPA for approval prior to any project implementation activity such as equipment purchase;
  - BPA will establish a target standard of service of 10 working days for completing the review and comment, M&V approval and special project approvals. An incomplete request will obviously hold up the final decision. A need for external expert review may also extend the 10-working day target.
11. There will be no new stranded investment clauses added to the CRC, but the ConAug stranded investment clauses will be carried over to the CAA; and
12. Generally, residential measures will be reimbursed at between 20 and 35 cents/first year kWh depending on the measure; industrial at either 12 or 15 cents; agricultural at 15 cents; and commercial at 13 cents.

## Reimbursement Strategies and Levels Definitions

<b>aMW:</b>	Average megawatt of electricity. An average measure of the total energy delivered in one year -- 8,760,000 kilowatt-hours per year.
<b>Evaluation:</b>	<p>At its most basic level, evaluation tests in the field the assumptions made in planning when measures are installed by real people and used by real people. It is generally not part of oversight, does not affect payments, and is used to refine or confirm the planning assumptions for future use.</p> <p>BPA needs and will require cooperation with evaluations for both the CRC and the CAA to improve programs, to assure all ratepayers that we are running the most efficient programs that we can, and to show that energy efficiency is a reliable resource.</p>
<b>Fiscal Year (FY):</b>	BPA's fiscal year is from October 1 through September 30.
<b>HSPF:</b>	Heating Season Performance Factor.
<b>Incremental cost:</b>	A term of art that is used consistently within the Regional Technical Forum (RTF) and in this document, as well as in all California utilities. It can be the full cost of some measures, especially in retrofit situations or when a measure is completely incremental to standard practice. It is generally defined as the "energy efficiency improvement related costs above what would be required by standard practice or code." It is often called "qualifying costs of the measures."
<b>Measurement:</b>	<p>This refers to measurements taken to establish energy use or improvements in energy use. It can mean many things, such as testing duct leakage or measuring loading factors and run time in factories. It usually involves post and/or pre/post measurement. Large consumers often do it to make sure that they are getting what they pay for, or to better understand their system operations. The prevalence of required measurement for audits or for payment has varied in the field of energy efficiency, but the general rule is: the more uncertainty, the greater the risk of performance, the greater the need for actual measurement.</p> <p>BPA contracts will require some level of measurement for projects for which the reimbursement is established by the savings achieved.</p>
<b>Oversight:</b>	<p>This is a contract management activity that is usually limited to assuring the government that it is getting what it pays for with some level of certainty, and is used mostly for BPA activity. It will be a required part of all post-2006 conservation activities.</p> <p>Those who have recently participated in BPA programs requiring oversight have reported this to be a minimal inconvenience and sometimes a constructive process. Those who haven't had recent exposure to Con Aug oversight have expressed concerns about the burdens and risks involved. BPA will review the contract language to see if it can be simplified, but BPA cannot eliminate its right to conduct oversight visits.</p>

<b>PTCS™:</b>	Performance Tested Comfort Systems
<b>PTR:</b>	Planning, Tracking, and Reporting System for utilities to report conservation activity.
<b>Regional Technical Forum (RTF):</b>	The RTF is an advisory committee established in 1999 to develop standards to verify and evaluate conservation savings. Members of the RTF are individuals experienced in conservation program planning, implementation and evaluation and are appointed by the Northwest Power and Conservation Council.
<b>RTF Reporting Software/System:</b>	The software referred to is now known as the Planning, Tracking, and Reporting System, which is hosted by the RTF.
<b>SEER:</b>	Seasonal Energy Efficiency Ratio
<b>VAR:</b>	Volt-amperes-reactive (reactive power).
<b>Verification:</b>	This is a responsibility to inspect actual presence and proper operation of an installed measure as intended. This is a level of quality control. It is often a function performed by the utility before paying rebates. Some turn-key program operators do it to make sure that their employees are following the specs. BPA may, during an oversight visit, review measures which have been verified by the utility or a turn-key program operator.
<b>Willingness to Pay Acronyms:</b>	<ul style="list-style-type: none"> <li>▪ LO: Lost opportunities are more valuable because they can't be captured later, or will cost much more to capture later.</li> <li>▪ LML: Long measure lives represent a larger value to the region and the power system, even if the ultimate value is less certain over a longer measure life.</li> <li>▪ CPN: Customer program needs: customers have a set of traditional programs and offerings that help define their relationship with their consumers. In other cases, small utilities need a simple measure that they can offer without a lot of technical resources. In all cases, the measures are cost-effective from a total resource cost (TRC) perspective.</li> <li>▪ MB: Market barriers represent an acknowledgement that there are substantial barriers to getting consumer attention or co-funding. Market transformation has as one of its goals trying to overcome market barriers.</li> <li>▪ WTP: This refers to some control required to keep the overall willingness to pay within the range of the BPA target.</li> </ul>

## Post-2006 Conservation Program: Reimbursement Strategies and Levels

### Introduction

Throughout the Conservation Rate Credit (CRC) and Conservation Acquisition Agreement (CAA) Implementation Manual, BPA intends to provide an attractive and effective approach to help customers achieve conservation targets at the lowest cost to BPA.

### Purposes of this Section of the Implementation Manual:

This section describes BPA's Willingness to Pay (WTP) levels and reimbursement strategies for conservation activities under both the CRC and CAA (bilateral contracts).

1. The numbers and values proposed in this document represent BPA's best projections and intent at this time.
2. BPA's intent is to provide a standard CRC Implementation Manual and standard bilateral agreements based on the details in this document and to incorporate these details into the Planning, Tracking, and Reporting system (PTR). Except where noted, most decisions apply to both the CRC and CAA.
3. Any utility may request to establish an individually negotiated custom agreement for the CRC or the CAA. It is assumed that any custom agreement will be based on the same principles as the standard offerings. BPA will enter into a custom agreement when it is mutually beneficial, usually meaning when the agreement will directly or indirectly lower costs for BPA.

### Conservation Program Principles

The Utility Sounding Board process built on and elaborated on the principles from the February 2005 Short-term Regional Dialogue Policy and the June 28, 2005, Final Post-2006 BPA Conservation Program Structure. The following key principles are quoted from the Conservation Program Structure.

1. **Conservation Achieved at the Local Level:** The bulk of the conservation to be achieved is best pursued and achieved at the local level. There are some initiatives that are best served by regional approaches (for example, market transformation through the Northwest Energy Efficiency Alliance). However, the knowledge local utilities have of their consumers and their needs reinforces many of the successful energy efficiency programs being delivered today.
  - Local Control: BPA will foster local utility initiative and control of conservation efforts to the maximum extent it can, consistent with meeting cost and verification goals.
  - Each utility may choose the incentive level to pay its end users but is credited only the amount BPA offers for each cost-effective measure.
  - BPA will design systems for payments or utility credit/reimbursement, not design individual utility programs. Using BPA's WTP and rate credit/contract specifications, each utility is free to design its own incentives, marketing, or delivery mechanisms. BPA will need to do site verifications as part the agreement with the utility, but this is not

the same as dictating the relationship between the utility and its consumer; BPA's focus is on the interaction between BPA and its utility customers.

2. **Achieve Conservation at Lowest Cost Possible to BPA:** BPA will seek to meet its conservation goals at the lowest possible cost to BPA. While the inclusion of only cost-effective measures and programs is a given, the region can benefit by working together to jointly drive down the cost of acquiring those resources.
  - BPA's first concern is achieving cost-effective savings on a total resource cost (TRC) basis; the secondary consideration is making efficient use of available ratepayer funding for conservation by minimizing free-ridership. Situations in which free-ridership might lead to inefficient use of BPA's conservation funding will be considered at the program design stage in most cases.
  - BPA's WTP may vary by sector and measure, and will reflect the actual cost to acquire resources in each sector. It may also reflect program implementation realities.
    - a. In setting WTP, BPA considers what it may take to move the market, which includes providing a sufficient signal to the market and the recognition of hard to reach (HTR) market segments, the likely measure life of the savings, the need to capture lost opportunities, as well as meeting the overall BPA cost target per aMW.
    - b. In establishing a WTP level, BPA does not intend to pay the entire cost of measures. Cost share is expected. Paying less than the full cost, or paying less than some utilities believe is sufficient, is not intended to cause a utility cost-share. Rather, a utility may require the end-use consumer to pay the cost share. BPA does, however, recognize that some utilities, within their own program designs, may contribute some additional funding.
3. **Administrative Support:** BPA will continue to provide an appropriate level of funding for local administrative support to plan and implement conservation programs.
  - Reimbursement of administration costs at a rate up to 15 percent of the allowable costs may be included with the project budget and reimbursed by BPA under the CAA or claimed under the CRC;
  - BPA will allow small utilities (7.5 aMW or less) up to 30 percent of their rate credit for administrative costs:
    - a. BPA intends that the administrative cost allowed under CAA and CRC be an allowance, not a reimbursement of actual documented costs (other than state/CPA audit review for existence of sufficient administrative cost to justify the claim; see appendix A of this attachment);



- BPA engineers will provide **assistance with** custom proposals to the extent that engineering resources are available; and
  - BPA will support local utility programs to the extent possible, by specifically providing “tools” such as sample program marketing and implementation materials that can reduce utility or consumer confusion and simplify local utility program administration. In general, these “tools” will reduce local utility administrative costs and will be formatted to allow for local utility customization.
4. The list of qualified, cost-effective measures, deemed kWh savings, and payment rate per measure will generally be consistent across programs. However, BPA retains the flexibility to negotiate custom agreements, when there is a benefit to BPA.
- BPA will strive to make rules consistent across both the rate credit and the bilateral contract areas such as:
    - a. BPA’s WTP for a specific application of a measure;
    - b. The level of oversight, tracking, reporting, utility verification, and measurement of savings; and
    - c. BPA’s openness to negotiating custom contracts using the same criteria.
  - In general, if there is a deemed credit or reimbursement level for a particular measure, only that deemed credit or reimbursement level will be provided by BPA. There will not be an option to substitute calculated savings or another deemed savings number from the PTR System.
5. BPA will strive to provide simplified contracts.
- Before imposing a contractual requirement, BPA will ask itself why it is important or necessary. BPA is committed to clear, concise, and streamlined approaches, and
  - In most cases, where there are simplified credit/reimbursement schemes, the reporting of actual savings and/or measures installed in the PTR System will still be required.
6. BPA will strive to provide a streamlined approval process

### **Basic Building Blocks**

The fundamental way BPA will provide for local control and innovation is to structure its relationship to the utilities by crediting/reimbursing them for the verified energy savings they capture at either the cents per kWh up to the cost share amount (whichever is less), or by crediting/reimbursing them for the measures installed as provided in BPA’s WTP. How the utilities spend the reimbursements or the expenditures they make in their effort to capture the savings is between the utilities and their consumers. This allows maximum freedom for the utility to innovate, negotiate, and leverage the

credit/reimbursement amount. BPA is getting what it pays for at a price that BPA believes is fair, effective, and that meets BPA's least cost criterion<sup>3</sup>.

BPA will meet its objective to achieve all cost-effective savings at the lowest possible cost to BPA by establishing reasonable levels of WTP, and by requiring a cost share to cap BPA's investment in custom projects.

BPA will offer a simplified payment and review structure, which will reduce the burden of accounting and oversight. In addition, the planned levels of "Review and Comment" on proposals will provide the utility both more freedom and flexibility to seek assistance. The treatment of accounting for the administrative cost allowance will be consistent with the previous Conservation and Renewables Discount (C&RD). BPA will place the responsibility for verifying that there is a reasonable basis for the allowance in the hands of the state/CPA auditors for each utility.

In each sector, there will be a custom proposal pathway, unless there is a deemed approach available. The exception is that industrial lighting may be submitted as a custom proposal if the estimated savings are more than 100,000 kWh/year. Effective February 1, 2007, the cap on BPA's WTP was raised to 70 percent in all sectors for custom projects for which the proposal was approved by the COTR after that date. (This change affects the industrial, non-commercial lighting, and other categories that had not previously been at that level.)

### **Administrative Costs**

(See appendix A of this attachment)

### **Influences on BPA's Willingness to Pay (WTP)**

Each time WTP is described in this document, the measure is followed by an acronym(s), in parentheses, that reflects BPA's main reasoning behind the reimbursement level. A key to the WTP acronyms and other definitions is provided at the beginning of this Reimbursement Strategies and Levels document.

To avoid confusion, BPA's credit/reimbursement to the utility for savings achieved is based on busbar savings, which is generally 7.625 percent above the site savings<sup>4</sup>. This is consistent with the way BPA's aMW targets and its WTP are set.

## **RESIDENTIAL SECTOR**

The main cost-effective applications in the residential sector are: lighting, HVAC, weatherization, new construction, and appliances. BPA customers want to stay active in this sector. BPA's WTP and requirements for specific residential measures or projects are described below.

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<sup>3</sup> This does not imply that the utility will not have to track the costs of most commercial/industrial and agricultural projects, because the decision to pay per kWh or invoke the cost-share cap depends on knowing the actual incremental cost. This means that tracking and documenting will include all project conservation costs in order to determine the reimbursement level.

<sup>4</sup> Decrementing utilities may choose to accept payment for, and take a decrement for, only the 5 percent distribution line losses.

**Residential ENERGY STAR® CFL Lighting (MB; WTP)**

BPA will reimburse the utility \$2.50 per socket (screw-in or other) as the standard WTP. Each installed CFL must be ENERGY STAR-rated and wattage must be more than 5 Watts.

There are special situations for which BPA may be willing to pay more. BPA will reimburse \$4 per socket for customer proposals to get CFLs into hard to reach (HTR) or special opportunity segments. Such customer proposals must be pre-approved by BPA and must include a justification for why the segment is HTR or is a special opportunity. BPA is open to most ways to deliver products to such segments. These proposals may include lighting with additional measures such as showerheads in multifamily rental units or combined with duct sealing in manufactured homes to avoid missing savings opportunities and to make efficient use of site visits. Other examples include communities with language barriers, porch lighting initiatives, audit/install efforts, direct install efforts in small assisted living facilities, etc.

*(Again, whether the utility chooses to pay more or less for a specific bulb, or to substitute fixtures, the BPA WTP to the utility remains the same.)*

**Air Source Heat Pumps (CPN; LO)**

- BPA set credits/reimbursements based on the incremental savings from a standard efficiency air-source heat pump (heat pump efficiency upgrade), regardless of the consumer's reasons for the installation of a heat pump and regardless of the pre-existing heating system type, if any;
- Either electric or non-electric auxiliary heat systems may be installed with the heat pump. However, BPA expects the electric heat pump will be the primary system used to meet the heating needs of the house;
- For site-built single-family homes, most heat pump measures were initially determined to be cost effective. The credit/reimbursement level varies depending on whether the ducts are outside of the conditioned space or whether there is no substantial ducting outside the conditioned space. For heating zone 1, Heat Pumps with "Ducts Inside" is generally not a cost effective measure, so no credit/reimbursement will be provided for systems installed after October 1, 2007. See table R-1 for the credit/reimbursement schedule;
- Manufactured Homes: BPA will not provide credits/reimbursements for heat pumps installed in manufactured homes in heating zone 1/cooling zone 1 or heating zone 1/cooling zone 2, because the measure is not cost-effective. Heat pumps are cost effective in heating zones 2 and 3 and, on average, in heating zone 1/cooling zone 3.

BPA will provide credits/reimbursements for heat pumps installed in manufactured homes as shown in table R-1. Manufactured homes are almost always built on vented crawlspaces, rather than sealed basements, which means the Ducts Outside measure applies;

- The minimum required prescriptive performance standard is SEER 14 and HSPF 8.5. BPA will offer a higher credit/reimbursement for units with HSPF 9.5 or higher. Unless 9.5 HSPF heat pumps are determined cost-

effective, BPA will eliminate credits/reimbursements for this measure effective October 1, 2007;

- Heat pumps must be installed to the latest version of the “PTCS Air Source Heat Pump Installation Standards,” which is available on the PTR. Reminder: As a part of the PTCS installation standards, PTCS Commissioned Heat Pump certification is required on all heat pumps and PTCS Duct System certification may be required depending on the location of the ductwork;
- Where a house has a substantial<sup>5</sup> amount of ductwork in unconditioned space, the Heat Pump with Ducts Outside<sup>6</sup> measure must be claimed. Where a house does not have a substantial amount of ductwork in unconditioned space, the Heat Pump with Ducts Inside measure must be claimed (not applicable to heating zone 1). PTCS Duct System Certification is required when the Heat Pump with Ducts Outside measure is claimed;
- Homes with heated floor area greater than 4,500 square feet, which is twice the size of the prototypes used by the RTF to estimate savings, are allowed to claim two heat pump measures. BPA requires the newly installed heat pump(s) to be the primary heating source for the entire house.

BPA will credit/reimburse based on the heat pumps installed and claimed.

**Table R-1: Credits/Reimbursements for Heat Pumps**

	<b>Ducts Outside</b>	<b>Ducts Outside</b>	<b>Ducts Inside</b>	<b>Ducts Inside</b>
<b>Zones\Efficiency</b>	8.5 HSPF	9.5 HSPF***	8.5 HSPF	9.5 HSPF***
h1 c1 *(except MH)	\$615	\$740	\$270**	\$380**
h1 c2 *(except MH)	\$635	\$760	\$280**	\$390**
h1 c3	\$675	\$810	\$300**	\$420**
h2 c1	\$1,080	\$1,295	\$450	\$630
h2 c2	\$1,090	\$1,310	\$465	\$650
h2 c3	\$1,125	\$1,350	\$485	\$680
h3 c1	\$1,430	\$1,715	\$580	\$810
h3 c2	\$1,450	\$1,740	\$590	\$825
h3 c3	\$1,490	\$1,790	\$615	\$860

\* BPA will not provide credit/reimbursement for heat pumps installed in manufactured homes in heating zone 1/cooling zone 1 or heating zone 1/cooling zone 2.

\*\*Effective October 1, 2007, there will be no credit for heat pumps with ducts inside in HZ 1, because they are generally not cost-effective.

\*\*\*Unless 9.5 HSPF heat pumps are determined cost-effective, BPA will eliminate credits/reimbursements for this measure effective October 1, 2007.

<sup>5</sup> BPA interprets “substantial” to mean ~ 75 percent or more of the ducts are outside the conditioned space.

<sup>6</sup> “Ducts Outside” and “Ducts Inside” are shorthand for homes with ducts outside the conditioned space where duct testing and sealing can result in higher savings gains, and homes without substantial ducting outside the conditioned space, respectively.

### **Weatherization Measures (CPN; LML)**

BPA will offer \$0.30 per kWh savings for the cost-effective retrofit measures in the RTF list.

To the extent there are cost-effective retrofit weatherization measures in the RTF list for multifamily and manufactured homes, the reimbursement will be the same \$0.30 per kWh. Credits/reimbursements and busbar savings for specific measures can be found in the PTR.

Insulation measures must follow the latest version of the "Weatherization Specifications" found in the PTR. Air-sealing measures must follow the latest version of the "Air Sealing" specifications found in the PTR.

### **Low-Income Weatherization**

Low-income measures are generally the same as the weatherization measures found in all similar homes with the exception of Prime Window Replacements. Because utilities that provide funding for low-income programs to Low-Income Weatherization Service Providers (LIWSP) must ensure that the measures are cost-effective and qualifying, BPA has attached a simple list of the measures that are qualifying, including the prime window replacements.

*(Note: The Low-Income Weatherization Measure List is provided in attachment B, table B-1 of this manual.)*

### **Low-Income Window Replacement**

BPA will credit 30 cents/kWh based on the REPLACEMENT of existing prime windows. Replacement windows must have a weighted average value of  $U=0.30$ . Table R-2 lists the allowed existing window condition by house type and heating zone. Existing single pane windows with storm windows may be considered single pane windows for the purpose of determining eligibility. Deemed savings and credits can be found in the PTR.

**Table R-2: Low-Income Window Replacement Measure Eligibility**

Heating Zone	House Type	Existing Window Condition
1	Single-Family	Single pane with any frame type or double pane with metal frame
1	Manufactured Home	Single pane with any frame type
1	Multifamily	Single-pane with any frame type
2	Single-Family	Single pane with any frame type or double pane with metal frame
2	Manufactured Home	Single pane with any frame type or double pane with metal frame
2	Multifamily	Single pane with any frame type or double pane with metal frame
3	Single-Family	Single pane with any frame type or double pane with metal frame
3	Manufactured Home	Single pane with any frame type or double pane with metal frame
3	Multifamily	Single pane with any frame type or double pane with metal frame

*(Note: The Low-Income Prime Window Replacement List is provided in attachment B, table B-2 of this Implementation Manual.)*

### **Water Heaters** (CPN; LO)

BPA will provide credits/reimbursements of \$0.25 per kWh for cost-effective energy-efficient electric water heater measures. BPA will pay \$0.35/kWh for cost-effective water heater measures where the tank has a 20-year or longer warranty. Credits/reimbursements and busbar savings can be found in the PTR.

### **Gravity Film Heat Exchangers** (LO)

Cost-effective installations of gravity film heat exchangers in electric water heater applications are eligible measures, which may receive credits/reimbursement of \$0.35 per kWh (according to the busbar savings in the PTR). Credits/Reimbursements and busbar savings can be found in the PTR.

### **New Home Construction** (LO; LML; MB)

Credit/reimbursement for new home construction is described below for different types of new homes.

#### **New ENERGY STAR Site-Built Homes**

New electrically heated ENERGY STAR Site-Built Homes are cost-effective in all climate zones with zonal electric heating or electric heat pumps. BPA will provide credits/reimbursement as shown in table R-3.

**Table R-3: Zonal/Heat Pump Reimbursements for ENERGY STAR Site-Built Homes**

	<b>Ducts Outside<sup>7</sup></b>	<b>Ducts Inside</b>
Heating 1, Cooling 1 hp	\$1,140	\$ 600
h1 c2 heat pumps	\$1,180	\$ 600
h1 c3 heat pumps	\$1,250	\$ 600
<b>All zonal      \$1,170</b>		
h2 c1 heat pumps	\$1,800	\$ 850
h2 c2 heat pumps	\$2,000	\$ 850
h2 c3 heat pumps	\$2,100	\$ 850
<b>All zonal      \$1,400</b>		
h3 c1 Hp	\$2,600	\$1,020
h3 c2 Hp	\$2,700	\$1,020
h3 c3 Hp	\$2,800	\$1,020
<b>All zonal      \$1,600</b>		

Gas-heated ENERGY STAR homes are not TRC cost-effective, but electric appliance and lighting rebates can be provided to customers in gas-heated homes.

Deemed measures eligible for adding to an ENERGY STAR site-built home include: fluorescent lighting measures above what the ENERGY STAR homes measure requires, ENERGY STAR Clothes Washers, ENERGY STAR Refrigerators, ENERGY STAR Freezers, and cost-effective Gravity Film Heat Exchangers.

ENERGY STAR site-built homes must be certified as ENERGY STAR by the appropriate State Certification Organization. (For more information on the Northwest ENERGY STAR New Homes program, visit <http://www.northwestenergystar.com>.)

### **New ENERGY STAR Manufactured Homes (LML; LO; CPN)**

Given the big increment in savings above HUD standards, electrically-heated ENERGY STAR manufactured homes (MH) are very cost-effective. BPA will provide a credit/reimbursement as shown in table R-4.

**Table R-4: Credits/Reimbursements for ENERGY STAR Manufactured Homes**

Heating Zone 1	\$ 850
Heating Zone 2	\$1,150
Heating Zone 3	\$1,450

Deemed measures eligible for adding to ENERGY STAR Manufactured Homes include: Air-Source Heat Pumps in heating zones 2 and 3 (but not in heating

<sup>7</sup> See footnote 4 for the meaning of these classifications.

zone 1), fluorescent Lighting measures, ENERGY STAR Clothes Washers, ENERGY STAR Freezers, and ENERGY STAR Refrigerators.

ENERGY STAR Manufactured Homes must be certified by the Northwest Energy Efficient Manufactured (NEEM) Homes program as ENERGY STAR.

**Multifamily New Construction** (LO; LML; MB)

Multifamily (MF) new construction of five or more units and three stories or less can be made more efficient than code or standard practice. Projects meeting the latest version of the RTF’s “Multifamily New Construction Low Rise Technical Specifications” (available in the PTR System) will be reimbursed on a per unit basis as outlined in table R-4A.

**Table R-4A: Credits/Reimbursements for MF New Construction**

Heating Zone 1	\$80 per unit
Heating Zone 2	\$115 per unit
Heating Zone 3	\$140 per unit

Table R-4B summarizes the required prescriptive path for compliance with the MF New Construction Low Rise Specifications.

**Table R-4B: MF New Construction Specifications – Summary <sup>1</sup>**

Component		Zone 1 (<6,000 HDD)	Zone 2 (6,000- 7,500 HDD)	Zone 3 (>7,500 HDD)
Ceilings <sup>2</sup>	Attic	R-38 Std.	R-38 Std.	R-38 Std.
	Vaults	R-30	R-30	R-30
Walls <sup>2</sup>	Above Grade	R-21, Inter.	R-21, Inter.	R-21, Inter.
	Below Grade Inter. w/R-5 thermal break <sup>4</sup>	R-21	R-21	R-21
Floors	Over Crawlspace and Unheated Basements	R-30	R-30	R-30
	Slab-on-Grade Perimeter	R-15	R-15	R-15
Glazing <sup>3</sup>	Maximum NFRC rated U-value	U-0.30	U-0.30	U-0.30
Exterior Doors		U-0.19	U-0.19	U-0.19
Duct Insulation	Rigid	R-11	R-11	R-11
	Flexible	R-8	R-8	R-8
Water Heaters		<b>See Specification</b>		
Mechanical ventilation and pollutant source control in all climate zones.				

<sup>1</sup> This table presents a summary of the requirements - the RTF's Multifamily New Construction Specifications shall be followed.

<sup>2</sup> Inter. indicates intermediate framing techniques

<sup>3</sup> An area weighted U-factor for windows which meets the component requirement of this table is acceptable.

<sup>4</sup> A thermal break having a minimum value of R-5 is required between slab floors and all walls and footings.

Deemed measures eligible for adding to MF homes include: fluorescent lighting measures, ENERGY STAR Clothes Washers, ENERGY STAR Refrigerators, ENERGY



STAR Freezers, ENERGY STAR Dishwashers, and cost-effective Gravity Film Heat Exchangers.

Projects not meeting the prescriptive specifications that qualify as being above code or standard practice efficiency must be reviewed and approved by BPA as *custom projects*. Consistent with MH and single-family (SF) homes, \$0.30 per kWh will be the applicable reimbursement level (with a cap of 70 percent of the incremental energy related measure costs). The amount and type of measurement and verification (M&V) required will be determined by the BPA reviewer, but is not expected to be complex.

MF housing above three stories will be considered as commercial construction and submitted for new construction incentives and BPA pre-approval under the commercial sector WTP.

### **New Geothermal Heat Pump Systems (LML; CPN; LO)**

BPA set credits/reimbursements based on the incremental savings from a standard air-source heat pump (upgrade to a geothermal system), regardless of the consumer's reasons for the installation of the geothermal heat pump system and regardless of the fuel used in the pre-existing heating system, if any. However, replacement of an existing geothermal heat pump unit does not qualify for BPA credit/reimbursement; all geothermal heat pump system components must be newly installed. Geothermal Heat Pump installations must adhere to the latest version of the "PTCS Ground Source Heat Pump Specifications," which are available in the PTR.

*SF installations in HZ 1:* BPA will provide a melded credit/reimbursement of \$2,400 for cost-effective geothermal heat pump installations that are identified in the PTR as cost-effective.

*SF installations in HZ 2 and 3:* Most installations are cost-effective. Because of these commonalities, BPA will offer a simplified reimbursement of \$3,000 per unit.

*Manufactured Homes:* There are no deemed cost-effective geothermal heat pump measures in manufactured homes. BPA will provide no deemed credit/reimbursement.

*Multifamily and Commercial New Construction:* Cost-effective geothermal heat pumps for **all** MF and commercial new construction applications (including MF greater than three stories) will be reimbursed according to the commercial sector reimbursement schedule as a custom project.

## **Miscellaneous**

### **Line Voltage Electronic Thermostats**

Replacement of bi-metal line voltage thermostats in existing single-family homes with line voltage electronic thermostats will be credited/reimbursed **per home** as listed in table R-5. The credits/reimbursements in heating zones 2 and 3 are capped based on the incremental cost of the measure. All existing thermostats, except those in bathrooms, must be replaced with thermostats in accordance with the most recent version of the "Electronic Thermostat Specifications," which are available in the PTR.

**Table R-5: Credits/Reimbursements for Line Voltage Electronic Thermostats per Home**

HZ 1	\$115
HZ 2	\$160
HZ 3	\$160

**PTCS Duct Sealing in Existing Manufactured Homes (MB; WTP)**

BPA will provide credit/reimbursement for retrofit PTCS duct sealing in existing electrically heated manufactured homes\*. The duct system must be certified as a PTCS Duct System. The BPA credit/reimbursement will be according to table R-6.

**Table R-6: Credits/Reimbursements for PTCS Duct Sealing in Manufactured Homes (All climate zones)**

HZ 1*	\$280
HZ 2	\$400
HZ 3	\$400

As noted earlier under HTR lighting, combining this measure with direct install lighting may increase the value of the visit to the home and allow a combined higher credit/reimbursement.

This measure may not be claimed separately in conjunction with a heat pump upgrade.

\* *Retrofit PTCS Duct Sealing in SGC Manufactured Homes is not a cost-effective measure in HZ1, and, therefore, it is not eligible for credit/reimbursement in HZ 1.*

**PTCS Duct Sealing in Existing Single-Family Homes (WTP)**

Retrofit PTCS duct sealing as a stand-alone measure in existing electrically heated SF site-built homes will be credited/reimbursed at \$400 for all climate zones. In order to be eligible for the credit/reimbursement, the pre-existing duct leakage to the outside must be greater than 250 CFM<sub>50</sub> or 15 percent of the floor area, whichever is less. The duct system must be certified as a PTCS Duct System.

This measure, as specified in the preceding paragraph, may be claimed in conjunction with a "Ducts Inside" heat pump upgrade; however, the measure may not be claimed in conjunction with a "Ducts Outside" heat pump upgrade or in new construction.

**ENERGY STAR Clothes Washers (LO; CPN; MB)**

(Modified energy factor (MEF) 1.72 is the 2007 ENERGY STAR level.)

BPA will credit/reimburse two amounts for any ENERGY STAR-rated residential clothes washer depending on the fuel used to heat water. For installations in homes verified to use electricity to heat water, the reimbursement level will be \$70; for installations in homes with gas or unverified water heater fuel type, the credit/reimbursement will be \$25.

**ENERGY STAR Dishwashers (LO; CPN)**

BPA will credit/reimburse \$25 per ENERGY STAR-rated dishwasher.

**ENERGY STAR Refrigerators** (CPN; LO)

BPA will credit/reimburse \$25 per ENERGY STAR-rated full size (7.75 cu. ft. or greater) refrigerator.

**ENERGY STAR Freezers** (CPN; LO; WTP)

BPA will credit/reimburse \$12 per ENERGY STAR-rated full size (7.75 cu. ft. or greater) freezer.

**Residential Refrigerator Decommissioning** (MB; WTP)

BPA will credit/reimburse \$85 per decommissioned residential refrigerator unit. Decommissioning has a short measure life. Its expected high free-ridership is accounted for in the savings numbers.

The existing refrigerator must be verified as functional, serving a home within the participating utility's service territory, and must have at least 14 cu. ft. capacity. Unit must be decommissioned and its components recycled.

The ENERGY STAR Refrigerators measure may be added to the Refrigerator Decommissioning measure.

**Multifamily Showerheads and Aerators** (WTP)

BPA will credit/reimburse the utility \$12 per MF living unit with electrically heated water if all showerheads and at least the kitchen faucet have low-flow showerheads and aerators installed. The pre-existing showerhead(s) must have a tested flow rate of at least 3.0 gallons per minute (gpm). The replacement showerhead(s) must have a tested flow rate of 2.5 gpm or less. Showerheads must be installed by utility staff or a utility contractor.

**COMMERCIAL SECTOR**

Lighting, HVAC, and commercial refrigeration dominate the savings opportunities in commercial buildings. Efficient power supplies for computers and power controls for networked computers also represent other savings opportunities.

The overall structure for the commercial sector credit/reimbursement is shown below:

- BPA will pay specified reimbursements for selected measures (deemed measures) (e.g., Commercial & Industrial Lighting for stand-alone lighting, computer controls, etc.) and
- BPA will pay a credit/reimbursement of 13 cents/kWh up to 70 percent of the project incremental cost for HVAC, commercial refrigeration, and interacting lighting.

## Deemed Measures

### Deemed Commercial Food Service Reach-in Refrigeration Measures (solid and glass door)

Deemed Credits/Reimbursements based on CEE Tier 2 Commercial Food Service Refrigerators and Freezers

(Link to CEE list: <http://www.cee1.org/com/com-kit/com-kit-main.php3#qp>)

**Table R-7A: Refrigerator Credit/Reimbursement**

Size (cu. ft.)	# of Qualifying CEE Tier 2 Units	Credit/Reimbursement
0-30	36	\$100
30-60	8	\$150
60-90	10	\$200

**Table R-7B: Freezer Credit/Reimbursement**

Size (cu. ft.)	# of Qualifying CEE Tier 2 units	Credit/Reimbursement
0-30	12	\$200
30-60	19	\$400
60-90	16	\$700

Notes: Size is interior volume of the new equipment as listed by CEE.  
No credit/reimbursement for Tier 1, which is baseline practice.

## Grocery Stores

### Grocery Program (Third Party)

BPA will credit/reimburse on a dollar-for-dollar basis measures implemented and documented under a pre-approved third party contract. The dollar-for-dollar credit/reimbursement will be documented based on the rebate form provided by the approved third party contractor. The approved third party contractor will input the details of the accomplished measures into the PTR System for the utility or BPA if utilities' have a signed letter of agreement to participate in the Grocery Program. (Measures installed for credit under the Grocery Program are qualifying measures and expenditures for purposes of administrative allowance, because the utility is still responsible for verification of the installation of the measures as they are for other credited/reimbursed measures. These measures are subject to the utility oversight and records requirements under section 1.7 of the Implementation Manual.)

**Network Computer Power Management (MB; WTP)**

BPA will credit/reimburse \$17 per workstation.

**Pre-rinse Spray Wash valves (WTP)**

BPA will credit/reimburse \$150 per qualified installation. Qualified installations require that the water for dishwashing be heated with electricity and that the facility serves 10 or more meal shifts per week (for example, a facility that serves lunches and dinners, five days a week), or that the utility document the reason for exceptions to the 10-meal rule. The exceptions should indicate that there is an equivalent amount of usage of the rinse system as with 10 meals (e.g., commercial bakeries, central school district cafeterias that prepare thousands of hot meals, or catering facilities that may only be used for three parties a week, but provide meals for hundreds of people at a time, etc.).

**Existing Small Office or Retail (<5,000 sq. ft.) Insulation Measures**

Deemed energy savings for attic, wall, and floor insulation measures are available for existing small buildings (<5,000 sq. ft.) used for office or retail activities. BPA will credit/reimburse on a per square foot basis at \$0.13/deemed kWh energy savings.

**ENERGY STAR Commercial Clothes Washers**

BPA offers two tiers of credit/reimbursement.

(Note: If the clothes washer is on the ENERGY STAR commercial list, it can be claimed as a commercial measure; if the clothes washer is on the ENERGY STAR residential list, it can be claimed as a residential measure.)

**Table R-8: Credit/Reimbursement for ENERGY STAR Commercial Clothes Washers**

<b>PRIOR to 2/1/07</b>		
MEF 1.42-1.79	▪ Electric Domestic Hot Water and Dryers	▪ \$ 90
	▪ All other combinations	▪ \$ 45
MEF 1.80 and higher	▪ All electric	▪ \$180
	▪ All other combinations	▪ \$ 75
<b>Starting 2/1/07</b>		
ENERGY STAR	▪ All electric	▪ \$180
	▪ All other combinations	▪ \$ 75

**80+ Efficient Power Supplies (MB; WTP; LO)**

This is currently handled through the Northwest Energy Efficiency Alliance (NEEA) to get computer hardware manufacturers on board. It may be necessary for local utilities to support the manufacturers’ buy down once the initial NEEA funds are expended, probably through contributions to NEEA at around \$5 per computer. This measure lends itself more to the CRC than to CAA, but it is one way to acquire cost-effective resources with little administrative burden.

**Commercial and Industrial Lighting Credit/Reimbursement Schedule (CP; WTP)**

- The Commercial and Industrial Lighting measure list credit/reimbursement schedule and requirements must be used for lighting-only projects in any size commercial, industrial, agricultural, or institutional facility. The list is available on the PTR System under Downloads - "Commercial & Industrial Lighting."
- If there is a measure not found on the list of C&IL measures for which the customer would like to have a deemed credit/reimbursement, the customer may request a one-time approval from BPA to use a deemed measure and credit.
- If the measure does not qualify for a deemed credit/reimbursement after a review, then the customer can submit a custom proposal, or seek to have a deemed value established through the RTF.

Credits for some measures in the C&IL list will change over time to reflect market conditions. Table R-9 shows how the T-8 measure credits will change.

**Table R-9: Credits/Reimbursements for Standard and High Performance T8 Lamps and Ballasts**

<b>Fiscal Year 2007</b>	
HP T8 lamps and ballast (2-4 lamps)	▪ \$30
HP T8 lamps and ballast (1 lamp)	▪ \$15
Std T8 lamps and ballast (2-4 lamps)	▪ \$15
Std T8 lamps and ballast (1 lamp)	▪ \$ 8
<b>Fiscal Year 2008</b>	
HP T8 lamps and ballast (2-4 lamps)	▪ \$30
HP T8 lamps and ballast (1 lamp)	▪ \$15
Std T8 lamps and ballast (2-4 lamps)	▪ \$10
Std T8 lamps and ballast (1 lamp)	▪ \$ 5
<b>Fiscal Year 2009</b>	
HP T8 lamps and ballast (2-4 lamps)	▪ \$30
HP T8 lamps and ballast (1 lamp)	▪ \$15

**Combined and Interactive Commercial Projects (MB; WTP)**

Combined and/or interactive commercial projects that include lighting, commercial scale refrigeration, and HVAC measures, among other cost-effective measures that are calculated, will be credited/reimbursed at \$0.13/kWh, not to exceed 70 percent of the incremental installed measure cost. The incremental cost for retrofit of existing equipment is the full installed measure cost. For replacement of burned out/failing/failed equipment, the incremental cost (and savings) is the cost above code or its equivalent. For example, for HVAC replacement, the incremental cost is the cost of equipment above the federal or state applicable standard for new or replacement equipment.

As described earlier in this document, for custom projects, utilities must submit an M&V plan for BPA approval prior to any project implementation activity such as equipment purchase. *See ENDNOTE for further discussion.* Also, projects with credit/reimbursement levels \$30,000 and above will require "Review and Comment" by BPA prior to any project implementation activity.

### New Commercial/Industrial/Agricultural Construction Lighting (LO, LML, WTP)

BPA will reimburse a fraction of the cost of new high-efficiency lighting measures in new commercial/industrial construction. Table R-10 indicates the inaugural list of measures and the credits/reimbursements available from BPA. The list may be supplemented with qualifying new measures; all readers should check the PTR for the latest measures. As with other measures, BPA may change or remove some of these measures/credits on October 1, 2007, if the market and/or other analyses indicate that it would be appropriate.

**Table R-10: Credit/Reimbursement Commercial & Industrial New Construction Lighting Program\***

**NW Public Power Utility  
Program Offer of Incentive Levels**

Code	New Fixture/Sensor Description	Incentive Per Unit**
<b>A.</b>	<b>High Performance T8 Fluorescent Lamps and Electronic Ballast in a New Fixture</b>	
	The fixture shall include a high performance 48" T8 lamp and ballast system listed on the CEE qualifying products list. Refer to this link: <a href="http://www.cee1.org/com/com-lt/com-lt-prod.pdf">http://www.cee1.org/com/com-lt/com-lt-prod.pdf</a>	
1	Upgrade any fluorescent fixture to high performance	\$10
<b>B.</b>	<b>High Bay T8 or T5 Fluorescent Fixture</b>	
	T5 fixture must have 3 or more lamps, T8 fixture must have 4 or more lamps. Fixture must be installed in a high bay area with a minimum ceiling height of 15'.	
1	T8 or T5 New "High Bay" Fixture	\$50
<b>C.</b>	<b>Sensor or Timer Control of Fluorescent</b>	
	Sensors required by code are not eligible.	
1	Controls a minimum of 120 Watt connected load.	\$30
<b>D.</b>	<b>Stairwell Fluorescent Fixture</b>	
	Fixture must be specifically designed for stairwell lighting.	
1	Bi-level fixture with occupancy sensor control	\$50
<b>E.</b>	<b>Ceramic Metal Halide (hard-wired)</b>	
	Hard-wired new recessed can or track heads (cans). Incentive is per lamp, i.e., per track head.	
1	20 to 100 Watts (Nominal Lamp Watts)	\$40
2	101 to 400 Watts (Nominal Lamp Watts)	\$50

\* Applies to lighting systems in commercial, industrial, and agricultural new construction facilities. For instance, all commercial and industrial facilities, plus wineries, potato storage sheds, pump houses, office space, and other on-farm facilities.

\*\*More than one measure can be claimed per fixture. For example: a high-bay T8 fixture could receive a high-performance, high-bay and sensor incentive for each fixture.

**New Commercial Construction and Major Renovation and Residential Multifamily Higher than Three Stories (LO; MB)**

New construction and major renovations (multiple end-uses changed, with a construction or building permit required) will be reimbursed on a performance-based approach that credits/reimburses the lesser of \$0.20/kWh or 70 percent of incremental cost (which includes payments for design assistance/technical assistance) for improved efficiency above code. The key to project eligibility for the higher “new construction” reimbursement is the existence of an implementation design plan that usually involves modeling and a building construction permit. These projects are partly self-defining because the projects must be submitted to BPA for pre-approval. The higher reimbursement values are provided to allow the utility to bring the extra modeling and design resources to bear.

*As described earlier in this document, all new construction/major renovation projects will require BPA approval of the project modeling and M&V plan.*

**AGRICULTURAL SECTOR**

(MB; CPN; WTP)

On-farm measures should be considered agricultural, and any storage, processing (transportation) or other activities involving farm products off the farm should be considered industrial food processing. The property line is a good surrogate for demarcation.

Utilities that have a CAA contract with a Commercial & Industrial Lighting Standard Offer budget may use that budget to claim reimbursements for lighting in agricultural facilities. These claims must be entered in the PTR System.

Agriculture is a cash-constrained sector that requires significant motivation to make investments. Credits/reimbursements will be roughly based on \$0.15/kWh not to exceed 70 percent of the incremental installed measure cost. The measures listed in table R-11 will be paid as shown below in table R-11.



**Table R-11: Credits/Reimbursements for Agricultural Measures**

<b>Sprinkler Equipment</b>	<b>Rebate</b>	<b>Est. Savings</b>
1. New flow controlling type nozzle for impact sprinklers.	\$3.00/nozzle <sup>1</sup>	20 kWh/yr
2. (a) Rebuilt or new impact sprinklers. (b) New nozzle for impact sprinkler replacing existing worn nozzle of same flow rate or less.	\$3.75/sprinkler <sup>1</sup> \$0.25/nozzle <sup>1</sup>	25 kWh/yr 15 kWh/yr
3. New rotating type sprinklers that replace impact sprinklers. (Entire pivot <sup>2</sup> must be upgraded. Flow may not be increased.)	\$3.00/sprinkler <sup>1</sup>	40 kWh/yr
4. New gasket for wheel lines, hand lines, or portable main line.	\$1.00/gasket	30 kWh/yr
5. (a) New low-pressure regulators. (Entire pivot <sup>2</sup> must be upgraded.) (b) New rotating type sprinklers that replace low-pressure sprinklers. (Entire pivot <sup>2</sup> must be upgraded. Flow may not be increased.)	\$3.00/regulator <sup>1</sup> \$3.00/sprinkler <sup>1</sup>	20 kWh/yr 20 kWh/yr
6. New multiple configuration nozzles for low-pressure pivot <sup>2</sup> sprinklers.	\$2.00/sprinkler <sup>1</sup>	20 kWh/yr
7. New multi-trajectory sprays that replace impact sprinklers. (Entire pivot <sup>2</sup> must be upgraded. Flow may not be increased.)	\$2.00/sprinkler <sup>1</sup>	25 kWh/yr
8. New sprays that replace low pressure sprinklers. (Entire pivot <sup>2</sup> must be upgraded. Flow may not be increased.)	\$1.00/sprinkler <sup>1</sup>	10 kWh/yr
9. New drains for wheel lines, hand lines, or pivots <sup>2</sup> . (Entire line must be upgraded.)	\$1.00/drain	30 kWh/yr
10. New hubs for wheel-lines. (Entire wheel line must be upgraded.)	\$6.00/hub	40 kWh/yr
11. New "goose neck" elbow for new drop tubes.	\$1.00/goose neck	20 kWh/yr
12. New drop tube for low-pressure pivot <sup>2</sup> sprinklers (min. 3 feet length).	\$3.00/drop tube	20 kWh/yr
13. New center pivot base boot gasket.	\$125.00/pivot	850 kWh/yr
14. Cut and pipe press repair of leaking hand lines, wheel lines, and portable mainline.	\$8.00/pipe section	60 kWh/yr
15. Rebuilt or new wheel-line leveler.	\$0.75/leveler	20 kWh/yr

**Note:** Number 2: has been broken into two parts, the sprinkler and the nozzle. This allows for the nozzle to be replaced separately from the sprinkler. The current offer assumed the nozzle would be replaced at the same time as the sprinkler. The change allows for either/or. Number 5: has been broken into two parts, 5(a) and 5(b). This allows for the upgrade of the regulators if new rotating sprinklers are already in place or for the installation of new rotating sprinklers if low-flow regulators are already in place.

Motor replacements are assumed to be in lieu of re-winds or at time of failure, and the incremental cost (and savings) is calculated off a National Electrical Manufacturers Association (NEMA) standard efficiency motor for the same size and application. They are TRC cost-effective because of the summer peaking load shapes in irrigated agriculture. The credits/reimbursements are found in table R-12.

<sup>1</sup> Rebate limited to no more than two units per sprinkled acre.

<sup>2</sup> Lateral moves also included.

Irrigation motor rebates require that the motor is open drip proof (**ODP**) or **totally enclosed fan cooled (TEFC)**, operates at 1,800 rpm, and is replacing older or rewound motors. Other types of motors will need to be submitted as custom proposals.

Eligibility:

- Motors that qualify for a BPA credit/reimbursement may be purchased anywhere, but must be installed in an irrigated agriculture application.
- Motors must be:
  1. New, three-phase AC induction;
  2. 5 to 500 horsepower; and
  3. NEMA design A, B, or C

Motors must meet or exceed the NEMA Premium<sup>®</sup> efficiency standard shown in table R-12 or table R-13.

**Table R-12: Credits/Reimbursements for Irrigation System Motors**

Measure Description HP	Motor Efficiency	NEMA Premium Efficiency	Rebate Per Unit	Estimated Savings Per Unit (kWh/yr.)
5 horsepower	83.0%	89.5%	\$55	352
7.5 horsepower	84.0%	91.0%	\$85	569
10 horsepower	85.0%	91.7%	\$110	726
15 horsepower	87.3%	92.4%	\$125	829
20 horsepower	88.0%	93.0%	\$165	1,084
25 horsepower	88.0%	93.6%	\$300	1,518
30 horsepower	88.8%	94.1%	\$340	2,290
40 horsepower	89.3%	94.1%	\$450	3,053
50 horsepower	89.3%	95.0%	\$595	4,134
60 horsepower	89.5%	95.0%	\$700	5,247
75 horsepower	89.5%	95.0%	\$985	6,559
100 horsepower	90.0%	95.4%	\$1,290	8,586
125 horsepower	90.3%	95.4%	\$1,520	10,137
150 horsepower	90.8%	95.8%	\$1,790	11,926
200 horsepower	91.0%	95.8%	\$2,290	15,265
250 horsepower	91.0%	95.8%	\$2,860	19,081
300 horsepower	91.0%	95.8%	\$3,440	22,897
350 horsepower	91.0%	95.8%	\$4,010	26,713
400 horsepower	91.0%	96.2%	\$4,100	27,349
450 horsepower	91.0%	96.2%	\$5,050	33,630
500 horsepower	91.0%	96.2%	\$5,600	37,367

**Table R-13: Credits/Reimbursements for Medium Voltage Irrigation System Motors (600v to 5,000v)**

Measure Description HP	NEMA Premium Efficiency	Rebate Per Unit	Estimated Savings Per Unit (kWh/yr.)
250 horsepower	95.0%	\$2,385	15,901
300 horsepower	95.0%	\$2,862	19,081
350 horsepower	95.0%	\$3,339	22,261
400 horsepower	95.0%	\$3,339	22,261
450 horsepower	95.0%	\$3,757	25,044
500 horsepower	95.0%	\$4,174	27,826

**Variable Frequency Drives on Small Milking Machines in Dairies (CPN; WTP)**

BPA will credit/reimburse \$2,200 for verified installations of Variable Frequency Drives (VFD) on milking machines of 10 hp or less. (For larger sized machines, a custom proposal with M&V is required.)

**Freeze Resistant Stock Water Tanks/Fountains**

Installation of freeze resistant stock water tanks/fountains is a cost-effective measure in heating zones 2 and 3. BPA will credit/reimburse \$165 for installation of a freeze resistant stock tank/fountain in heating zone 2 and \$225 for installation of a freeze resistant stock tank/fountain in heating zone 3. It is not cost effective in heating zone 1, so BPA will provide no credit/reimbursement.

Electric resistance stock tank heater(s) must be removed or permanently disabled. Tanks and installations must meet the RTF specifications for Freeze Resistant Stock Tanks/Fountains, available in the PTR.

**Other Agricultural Measures**

For other agricultural measures, BPA will credit/reimburse 15 cents/kWh or 70 percent, whichever is less, including the following, but not limited to:

- Low pressure conversion with pump work
  - Change to 40 foot spacing on hand lines and wheel lines to enable conversion
- Low energy precision application (LEPA) conversion for pivots and lateral moves
- Adjustable speed drives in certain applications (multiple-valved sprinkler systems and field elevation differences of 25 feet or greater)

The cost of the technical studies needed to accomplish the project is assumed to be covered in the BPA credit/reimbursement amount to the utility and in the total project cost for purposes of cost-capping. As with industrial projects, custom irrigation projects need to be run through the RTF calculator to determine TRC cost-effectiveness prior to submitting the M&V plan for approval by BPA.

*Note: As described earlier in this document, for custom projects utilities must submit an M&V plan for BPA approval prior to any project implementation activity such as equipment purchase. See ENDNOTE for further discussion. Also, projects with credit/reimbursement levels \$30,000 and above will require "Review and Comment" by BPA prior to any project implementation activity.*

### **Scientific Irrigation Scheduling (CPN; WTP)**

BPA will provide credits or reimbursements to customers for Scientific Irrigation Scheduling (SIS), which is defined in the RTF, but which requires knowledge of the data on weekly hydro application data for all water applied, evapotranspiration needs, and soil moisture tables. This measure only applies to agricultural systems for which there is pumping capacity above that needed to meet the normal needs of the crops.

The RTF determined that SIS is cost-effective with a TRC cost of \$13.50/acre first-year cost (\$7.50/acre initial cost and \$6/acre service) and \$6.00 an acre for each of the next two years, and expected savings ranging from 80 - 125 kWh/acre depending on the crop type, soil, climate, and pumping lift. BPA will reimburse the lesser of 15 cents/kWh or 70 percent of the SIS TRC cost (\$25.50) for a three-year measure life on a field by field basis.

The utility programs are unlikely to have the same crops, fields, farmers, or weather in each year. Therefore the reimbursement is based on a contractual three-year measure life, providing a minimum kWh result over all three years, as opposed to a physical measure life.

SIS projects must be submitted as custom proposals. A standardized M&V plan is available on the PTR Web site. Completion reports must be completed each year based on a field by field analysis using the standardized M&V algorithm.

Custom proposals can be credited/reimbursed over three years at \$0.05/year/kWh or one-third of the 70 percent cost (\$5.95/acre/year) on a field-by-field basis. Because the proper credit can only be claimed for the lowest sustained level of savings over the three years, true ups will be required at the end of the third year. True-up can take a few forms: working some SIS savings in the fourth year if the customer is an early starter, claiming equivalent credits from other qualifying measures, or by returning the unearned rate credit to BPA.

BPA offered this measure under the CAA beginning January 1, 2007.

### **INDUSTRIAL SECTOR**

(Including water and wastewater treatment, Distribution System Efficiency Improvements and Conservation Voltage Regulation)

#### **Cost Based Measure Reimbursement**

The C&IL lighting spreadsheet is must be used for lighting measures in industrial facilities.

*Exception: For industrial lighting-only projects where the estimated savings are over 100,000 kWh, the utility has the option to submit the project as a custom proposal. Since this requires a project proposal, M&V plan, and completion report, it involves substantially more effort than using the C&IL approach.*

## Other Cost-Based Industrial Reimbursements

There are no other pre-determined measures for the industrial sector. There will be no “motor rebate” program based on deemed hours of operation and assumed loading factors. Motors and drives will be eligible for calculated savings based on site-specific custom project analyses.

### Calculated Industrial Savings (WTP)

Process-related projects include production systems within a particular industry (e.g., pulping in wood products, food processing, plastic extrusion, compressed air, computer chip fabrication, drive systems, or drying systems in lumber products). Process and drive systems will involve site-specific calculations - motors, variable speed drives, pumps, ammonia-based refrigeration, etc. - and will be eligible for credit/reimbursement as part of an integrated approach.

The utility is required to choose path (A) or (B) below when it first signs up for either the CRC or CAA. This will establish the method to be used over the life of the longest lasting agreement (CRC or CAA) and will apply to all industrial projects, including Water and Wastewater Treatment, Distribution System Efficiency Improvements (DSEI), and Conservation Voltage Regulation (CVR). The same reimbursement scheme will apply to all industrial in both CRC and CAA projects within the utility. Industrial new construction reimbursements also are credited/reimbursed as in A and B below, but require pre-approval just as with new commercial customers.

BPA will **either**:

**(A)** Credit/reimburse the utility at 12 cents per kWh (up to 70 percent of the incremental energy project cost) with BPA arranging and paying for the technical assistance studies/audits. This takes the risk of “dry hole” audits away from the utility and shifts the expense from the utility to BPA.

**OR**

**(B)** Credit/reimburse the utility \$0.15 per kWh (which includes the cost of technical assistance/audits) up to 70 percent of the project’s incremental energy cost (which includes the cost of technical assistance/audits).

The cost of the audit and technical assistance is included in either the “project cost” or captured within the 15-cent reimbursement level.

The cost of “dry-hole” technical studies will be managed by the utilities within the overall reimbursement by BPA.

Regardless of the choice of A or B:

- The utility must pre-screen the projects for TRC cost-effectiveness by using the RTF protocol-based calculator, supplying the cost, savings, and industry sector (to get the appropriate load shape) prior to submitting the M&V plan to BPA for approval.
- For all custom projects, utilities must submit an M&V plan for BPA approval prior to any project implementation activity such as equipment purchase. Project paperwork shall include the basis for the savings estimates, as was required in the Conservation Augmentation (ConAug) proposal worksheet.

- In addition, projects with a BPA credit/reimbursement level of \$30,000 or higher must be submitted to BPA, prior to any project implementation activity such as equipment purchase, for review and comment. However, the ultimate decision to proceed with the project will be up to the utility and its consumers. (See *ENDNOTE for further discussion.*)

### **Other Requirements**

- No project with less than a one-year simple payback based on average utility billed energy costs will be credited/reimbursed by BPA.
- Stranded cost repayment provisions are required for CAA, but not for CRC.

BPA encourages all utilities to use technical assistance from third party service providers **and/or** from the Industrial Sector Initiative of NEEA. Industrial savings can be hard to identify, and the industrial partners tend to trust trade allies with whom they traditionally work.

### **Distribution System Efficiency and Conservation Voltage Regulation**

DSEI may include, among others, the following measures when cost-effective and otherwise qualifying:

- Power transformer replacement;
- Service conductor replacement;
- Insulator additions and replacement;
- Higher distribution primary voltage;
- Transformer load management (replacement of improperly sized transformers for loss improvements);
- Balancing loads and phases;
- Adding parallel feeders;
- Operation improvement (recognition and phase balancing);
- De-energizing seasonally unloaded transformers;
- Service distribution transformer
  - Replacing an existing or proposed transformer with a higher efficiency transformer
  - Multiple transformers vs. single transformer based on system analysis; and
- Power factor improvement (measure to improve power factor and reduce line losses)
  - VAR management;
  - Voltage management; and
  - Fixed and switched capacitors.

Conservation Voltage Regulation (CVR)

CVR includes distribution level and customer level (e.g., house, business) voltage regulation.

DSEI and CVR projects must be submitted as custom project proposals. All custom projects, for which reimbursement is based on verified savings, require BPA approval of a M&V plan. Standardized M&V protocols will be provided for some measures prior to any project implementation. DSEI projects must be submitted to BPA for approval prior to any project implementation activity such as equipment purchases.

Because DSEI and CVR are industrial projects, the credit/reimbursement amounts are determined by the industrial program options path chosen by the utility at the time it signs up for the CAA or CAA.

**Table R-14: Credits/Reimbursements for DSEI and CVR**

<b>Utility Distribution System</b>	<b>Credit/kWh</b>	<b>Project Cost Cap</b>
Option A	\$0.12	70%
Option B	\$0.15	70%

**New Industrial Construction (LO; MB)**

New industrial construction/major renovations will be credited/reimbursed in accordance with the 12 cent or 15 cent option, up to 70 percent of the incremental cost choice (above), with the technical assistance provided by either the utility (15 cents) or with help from BPA (12 cents). This does not include lighting measures available in the deemed Commercial and Industrial New Construction Lighting list available on the PTR System.

**“OTHER” SECTOR**

LED traffic signals and other non-building energy efficiency improvements can be credited/reimbursed at the rate of \$0.13/kWh, up to 70 percent of the incremental project cost.

**ENDNOTE****BPA Review and Comment**

It is necessary for BPA to have some involvement in projects involving large amounts of ratepayer dollars even when the servicing utility is willing to take full risk of payment based only on the measured savings. The reasons for this are:

- Some large customers feel that they can afford to take risks with getting paid only for measured project savings, but many utilities want to minimize risk;
- Regardless of utility size, BPA cannot set up situations that can result in massive problems with customer relations that will follow from projects that are not pre-screened and turn out to be ineligible, unworkable, and/or likely to produce disappointing savings, and for which BPA could not fully reimburse the utility after the fact; and

- A BPA review (second set of eyes) may identify improvements to projects which otherwise would have been a lost opportunity.

Given that BPA credits/reimburses based on verified savings for custom projects, all M&V plans, except when standardized, need to be approved by BPA. M&V approval may mean that some projects won't go forward because the results cannot be reasonably and defensibly measured. BPA approval of the M&V plan will be BPA's commitment to credit/reimburse for verified savings at the credit/reimbursement amount that is in effect at the time of the approval, regardless of what policy changes may occur before the M&V is completed.

For projects with expected BPA credit/reimbursement \$30,000 and above, BPA must review and provide comment. BPA distinguishes between "Review and Comment" and "approval with a notice to proceed." BPA Review and Comment will include BPA staff comments on any weaknesses and concerns they see in a project. For example, there may be concern that savings won't be achieved, or that the measures may not be reimbursed because they are ineligible (e.g., fuel switching or non-TRC cost-effective). BPA engineers may warn the utility about potential downsides and risks, but the utility may choose to move ahead with the project. Utilities will be reimbursed for qualifying measures based on the actual savings up to the cost cap as documented by the pre-approved M&V only after the M&V is completed. A completion report will be required.

BPA reviewers may suggest alternatives to consider, identify potential lost opportunities, and make other suggestions for improvement, but they will not require the utility or consumer to change the project to meet the preferences of the reviewer.

As usual, any customer may request technical advice from BPA staff regardless of the size of the project or the requirement for Review and Comment. BPA may not be able to meet the 10 working-day standard on non-required requests due to workload and the priority placed on required reviews.

### **Summary**

All projects for which payment is determined by the results of M&V require BPA approval of the M&V plan (commercial, industrial, agricultural, and other). Also, any M&V project with expected credit/reimbursement of \$30,000 or greater requires BPA Review and Comment.

In addition, regardless of the size of the project, BPA pre-approval is required prior to any project implementation activity for:

- DSEI
- CVR; and
- Commercial, industrial, or commercial-scale multifamily new construction.



**Appendix A – Administrative Costs (Reimbursement Strategies and Levels document)**

There are several issues surrounding administrative costs that need clarification. This appendix defines BPA’s intention, so that utilities may use the flexibility that is intended without confusion about what is meant. (See Implementation Manual section 1.2.)

- The up to 15 percent (30 percent for small utilities (7.5 aMWs of load or less) under the Conservation Rate Credit (CRC) applies to the sum of qualifying conservation expenditures. It does not apply to purchases of green power or donations to the Northwest Energy Efficiency Alliance (see examples in tables R-A1 and R-A2).
- It is above the BPA willingness to pay parameters, (i.e., BPA assumed that 15 percent would be spent on administrative costs when setting the levels of BPA willingness to pay.)
- It is not, however, above the total CRC available for the utility and it is not above and beyond the total qualifying contract amount in the CAA (see examples in tables R-A1 and R-A2).
- To clarify what should be included in the administrative allowance, the “up to 15 percent” administrative cost allowance (30 percent for utilities 7.5 aMW or less in the CRC) is intended to cover internal utility costs associated with the delivery of conservation, including general awareness building and general marketing (e.g., Web site maintenance, efficiency messaging, generic newsletters), record keeping, reporting, help with evaluations, overhead, contributions to internal staffing, or passed through to a “implementation pool” or a third party operating the utility’s conservation programs.

It is an allowance that is assumed to be far below the actual costs to the utility involved (risk that the allowance will exceed the actual costs is minor). The required state audit or CPA audits of the utility must address whether the utility has documented administrative costs related to the pursuit of conservation, and BPA will not duplicate that external review.

- All other funds reimbursed to the utility or allowed as credits against their CRC are expected to be spent on getting cost-effective measures installed.

**Table R-A-1: Examples of Claims under CRC**

<p><b>Budget:</b>                  \$300,000                  - \$100,000 spent for renewables                  - <u>\$ 50,000 spent on donations</u>                  \$150,000 available for measures and qualified for 15% admin  <u>\$ 22,500 allowed for admin</u>                  \$127,500 additional is left to use for measures and in support of getting measures into place (WTP)</p>	<p><b>Budget:</b>                  \$300,000                  - \$ 0 spent for renewables                  - <u>\$ 0 spent on donations</u>  <u>\$300,000 available for measures and qualified for 15% admin</u>  <u>\$ 45,000 allowed for admin.</u>                  \$255,000 additional is left to use for measures and in support of getting measures into place (WTP)</p>
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**Table R-A-2: Example of Claims on the Bilateral Side**

<p><b>Budget (not WTP) for ESO+:</b>                   \$200,000                  \$100,000 spent on measures over three years and in support of getting measures into place  <u>\$ 15,000 admin allowance</u>                  \$ 85,000 unspent that must be de-obligated</p>	<p><b>Budget for Custom Program:</b>  <i>(multifamily new construction, direct install, weatherization)</i>                  \$200,000                  \$170,000 spent on measures over three years and in support of getting measures into place  <u>\$ 30,000 admin allowance</u>                  \$ 0 unspent that must be de-obligated</p>
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## Attachment B: Low-Income Weatherization Measure and the Low-Income Prime Window Replacement Lists

Table B-1: Low Income Weatherization List

<b>BPA designates measures eligible under the Low Income Weatherization provisions of the Conservation Rate Credit \$ for \$ credit. Utilities are also directed to inform the state/CAP agencies/tribal organizations that receive CRC funds, that CRC funds can only be spent on measures that are listed as qualifying measures.</b>	
<b>Shaded Measures Do Not Qualify for Low Income Weatherization Measure credit.</b>	
<b>Technology, Measure or Practice</b>	<b>"Qualifies" or "Does Not Qualify"</b>
<b>Single Family Wx (All Heating Zones)</b>	
Single Family Weatherization - Infiltration Control (Cost and Savings per sq.ft. of floor area for each 0.1 ach reduction)	Qualifies
Single Family Weatherization - R0 to R19 Attic Insulation (Cost and Savings are per sq.ft. of attic area insulated)	Qualifies
Single Family Weatherization - R19 to R38 Attic Insulation (Cost and Savings are per sq.ft. of attic area insulated)	Qualifies
Single Family Weatherization - R0 to R19 Floor Insulation (Cost and Savings are per sq.ft. of floor area insulated)	Qualifies
Single Family Weatherization - R19 to R30 Floor Insulation (Cost and Savings are per sq.ft. of floor area insulated)	Qualifies
Single Family Weatherization - R0 to R11 Wall Insulation (Cost and Savings are per sq.ft. of wall area insulated)	Qualifies
<b>Multifamily Wx (All Heating Zones)</b>	Qualifies
Multifamily Weatherization - R0 - R19 Attic insulation (Cost & Savings are per square foot of attic area insulated)	Qualifies
Multifamily Weatherization - R19 - R38 Attic insulation (Cost & Savings are per square foot of attic area insulated)	Qualifies
Multifamily Weatherization - R0 - R19 Floor insulation (Cost & Savings are per square foot of floor area insulated)	Qualifies
Multifamily Weatherization - R19 - R30 Floor insulation (Cost & Savings are per square foot of floor area insulated)	Qualifies
Multifamily Weatherization - R0 - R11 Wall Insulation (Cost & Savings are per square foot of area insulated)	Qualifies
Multifamily Weatherization - Infiltration Control	Does Not Qualify

**Attachment B**

Technology, Measure or Practice	"Qualifies" or "Does Not Qualify"
<b>Manufactured Home Wx</b>	
<b>HZ1</b>	
Manufactured Home Weatherization - Infiltration Control (Cost and savings are per square foot of floor area per 0.1 air change per hour infiltration rate reduction) - Heating Zone 1	Qualifies
Manufactured Home Weatherization - Attic Insulation R0 to R19 (Cost and savings are per square foot of attic insulated) - Heating Zone 1	Qualifies
Manufactured Home Weatherization - Attic Insulation R19 to R30 (Cost and savings are per square foot of attic insulated) - Heating Zone 1	Does Not Qualify
Manufactured Home Weatherization - Floor Insulation R0 to R11 (Cost and savings are per square foot of floor insulated) - Heating Zone 1	Qualifies
Manufactured Home Weatherization - Floor Insulation R11 to R22 (Cost and savings are per square foot of floor insulated) - Heating Zone 1	Does Not Qualify
<b>HZ2</b>	
Manufactured Home Weatherization - Infiltration Control (Cost and savings are per square foot of floor area per 0.1 air change per hour infiltration rate reduction) - Heating Zone 2	Qualifies
Manufactured Home Weatherization - Attic Insulation R0 to R19 (Cost and savings are per square foot of attic insulated) - Heating Zone 2	Qualifies
Manufactured Home Weatherization - Attic Insulation R19 to R30 (Cost and savings are per square foot of attic insulated) - Heating Zone 2	Does Not Qualify
Manufactured Home Weatherization - Floor Insulation R0 to R11 (Cost and savings are per square foot of floor insulated) - Heating Zone 2	Qualifies
Manufactured Home Weatherization - Floor Insulation R11 to R22 (Cost and savings are per square foot of floor insulated) - Heating Zone 2	Qualifies
<b>HZ3</b>	
Manufactured Home Weatherization - Infiltration Control (Cost and savings are per square foot of floor area per 0.1 air change per hour infiltration rate reduction) - Heating Zone 3	Qualifies
Manufactured Home Weatherization - Attic Insulation R0 to R19 (Cost and savings are per square foot of attic insulated) - Heating Zone 3	Qualifies
Manufactured Home Weatherization - Attic Insulation R19 to R30 (Cost and savings are per square foot of attic insulated) - Heating Zone 3	Does Not Qualify

**Attachment B**

Technology, Measure or Practice	"Qualifies" or "Does Not Qualify"
Manufactured Home Weatherization - Floor Insulation R0 to R11 (Cost and savings are per square foot of floor insulated) - Heating Zone 3	Qualifies
Manufactured Home Weatherization - Floor Insulation R11 to R22 (Cost and savings are per square foot of floor insulated) - Heating Zone 3	Qualifies
<b>PTCS Duct Sealing</b>	
<b>Gas Heated Homes - Cooling Only (All Cooling Zones)</b>	
Manufactured Home w/o Electric Heat, w/CAC - PTCS Duct Sealing	Does Not Qualify
Manufactured Home Natural Choice, w/CAC - PTCS Duct Sealing	Does Not Qualify
Single Family w/o Electric Heat w/CAC - PTCS Duct Sealing	Does Not Qualify
<b>Electrically Heated Homes (Single Family and Manufactured Homes)</b>	
<b>H1</b>	
Manufactured Home Non-SGC Forced Air Furnace w/o CAC - PTCS Duct Sealing Heat Zone 1	Qualifies
Manufactured Home SGC Forced Air Furnace w/o CAC - PTCS Duct Sealing Heat Zone 1	Does Not Qualify
Single Family Forced Air Furnace w/o CAC - PTCS Duct Sealing Heat Zone 1	Qualifies
<b>H1C1</b>	
Manufactured Home Non-SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 1 - Cool Zone 1	Qualifies
Manufactured Home Non-SGC Heat Pump - PTCS Duct Sealing Heat Zone 1 - Cool Zone 1	Qualifies
Manufactured Home SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 1 - Cool Zone 1	Qualifies
Manufactured Home SGC Heat Pump - PTCS Duct Sealing Heat Zone 1 - Cool Zone 1	Does Not Qualify
Single Family Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 1 - Cool Zone 1	Qualifies
Single Family Heat Pump - PTCS Duct Sealing Heat Zone 1 - Cool Zone 1	Qualifies
<b>H1C2</b>	
Manufactured Home Non-SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 1 - Cool Zone 2	Qualifies
Manufactured Home Non-SGC Heat Pump - PTCS Duct Sealing Heat Zone 1 - Cool Zone 2	Qualifies
Manufactured Home SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 1 - Cool Zone 2	Qualifies
Manufactured Home SGC Heat Pump - PTCS Duct Sealing Heat Zone 1 - Cool Zone 2	Does Not Qualify

**Attachment B**

Technology, Measure or Practice	"Qualifies" or "Does Not Qualify"
Single Family Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 1 - Cool Zone 2	Qualifies
Single Family Heat Pump - PTCS Duct Sealing Heat Zone 1 - Cool Zone 2	Qualifies
<b>H1C3</b>	
Manufactured Home Non-SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 1 - Cool Zone 3	Qualifies
Manufactured Home Non-SGC Heat Pump - PTCS Duct Sealing Heat Zone 1 - Cool Zone 3	Qualifies
Manufactured Home SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 1 - Cool Zone 3	Qualifies
Manufactured Home SGC Heat Pump - PTCS Duct Sealing Heat Zone 1 - Cool Zone 3	Does Not Qualify
Single Family Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 1 - Cool Zone 3	Qualifies
Single Family Heat Pump - PTCS Duct Sealing Heat Zone 1 - Cool Zone 3	Qualifies
<b>H2</b>	
Manufactured Home Non-SGC Forced Air Furnace w/o CAC - PTCS Duct Sealing Heat Zone 2	Qualifies
Manufactured Home SGC Forced Air Furnace w/o CAC - PTCS Duct Sealing Heat Zone 2	Qualifies
Single Family Forced Air Furnace w/o CAC - PTCS Duct Sealing Heat Zone 2	Qualifies
<b>H2C1</b>	
Manufactured Home Non-SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 2 - Cool Zone 1	Qualifies
Manufactured Home Non-SGC Heat Pump - PTCS Duct Sealing Heat Zone 2 - Cool Zone 1	Qualifies
Manufactured Home SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 2 - Cool Zone 1	Qualifies
Manufactured Home SGC Heat Pump - PTCS Duct Sealing Heat Zone 2 - Cool Zone 1	Qualifies
Single Family Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 2 - Cool Zone 1	Qualifies
Single Family Heat Pump - PTCS Duct Sealing Heat Zone 2 - Cool Zone 1	Qualifies
<b>H2C2</b>	
Manufactured Home Non-SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 2 - Cool Zone 2	Qualifies
Manufactured Home Non-SGC Heat Pump - PTCS Duct Sealing Heat Zone 2 - Cool Zone 2	Qualifies
Manufactured Home SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 2 - Cool Zone 2	Qualifies
Manufactured Home SGC Heat Pump - PTCS Duct Sealing Heat Zone 2 - Cool Zone 2	Qualifies

**Attachment B**

Technology, Measure or Practice	"Qualifies" or "Does Not Qualify"
Single Family Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 2 - Cool Zone 2	Qualifies
Single Family Heat Pump - PTCS Duct Sealing Heat Zone 2 - Cool Zone 2	Qualifies
<b>H2C3</b>	
Manufactured Home Non-SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 2 - Cool Zone 3	Qualifies
Manufactured Home Non-SGC Heat Pump - PTCS Duct Sealing Heat Zone 2 - Cool Zone 3	Qualifies
Manufactured Home SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 2 - Cool Zone 3	Qualifies
Manufactured Home SGC Heat Pump - PTCS Duct Sealing Heat Zone 2 - Cool Zone 3	Qualifies
Single Family Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 2 - Cool Zone 3	Qualifies
Single Family Heat Pump - PTCS Duct Sealing Heat Zone 2 - Cool Zone 3	Qualifies
<b>H3</b>	
Manufactured Home Non-SGC Forced Air Furnace w/o CAC - PTCS Duct Sealing Heat Zone 3	Qualifies
Manufactured Home SGC Forced Air Furnace w/o CAC - PTCS Duct Sealing Heat Zone 3	Qualifies
Single Family Forced Air Furnace w/o CAC - PTCS Duct Sealing Heat Zone 3	Qualifies
<b>H3C1</b>	
Manufactured Home Non-SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 3 - Cool Zone 1	Qualifies
Manufactured Home Non-SGC Heat Pump - PTCS Duct Sealing Heat Zone 3 - Cool Zone 1	Qualifies
Manufactured Home SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 3 - Cool Zone 1	Qualifies
Manufactured Home SGC Heat Pump - PTCS Duct Sealing Heat Zone 3 - Cool Zone 1	Qualifies
Single Family Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 3 - Cool Zone 1	Qualifies
Single Family Heat Pump - PTCS Duct Sealing Heat Zone 3 - Cool Zone 1	Qualifies
<b>H3C2</b>	
Manufactured Home Non-SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 3 - Cool Zone 2	Qualifies
Manufactured Home Non-SGC Heat Pump - PTCS Duct Sealing Heat Zone 3 - Cool Zone 2	Qualifies
Manufactured Home SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 3 - Cool Zone 2	Qualifies

**Attachment B**

Technology, Measure or Practice	"Qualifies" or "Does Not Qualify"
Manufactured Home SGC Heat Pump - PTCS Duct Sealing Heat Zone 3 - Cool Zone 2	Qualifies
Single Family Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 3 - Cool Zone 2	Qualifies
Single Family Heat Pump - PTCS Duct Sealing Heat Zone 3 - Cool Zone 2	Qualifies
<b>H3C3</b>	
Manufactured Home Non-SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 3 - Cool Zone 3	Qualifies
Manufactured Home Non-SGC Heat Pump - PTCS Duct Sealing Heat Zone 3 - Cool Zone 3	Qualifies
Manufactured Home SGC Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 3 - Cool Zone 3	Qualifies
Manufactured Home SGC Heat Pump - PTCS Duct Sealing Heat Zone 3 - Cool Zone 3	Qualifies
Single Family Forced Air Furnace w/CAC - PTCS Duct Sealing Heat Zone 3 - Cool Zone 3	Qualifies
Single Family Heat Pump - PTCS Duct Sealing Heat Zone 3 - Cool Zone 3	Qualifies



Table B-2: Low-Income Prime Window Replacement List

Low-Income Prime Window Replacements <b>do not</b> qualify for \$ for \$ reimbursement or credit. Credit/reimbursement is based on \$0.30 per kWh of annual energy savings. Annual energy savings and credit/reimbursement levels are listed per square foot of glazing area replaced. Where credit/reimbursement level is \$0.00, the RTF has determined the application was not TRC Cost Effective and, therefore, <b>does not</b> qualify.				
Measure	Building Type	Delivery Mechanism or Program	Annual Savings @ Busbar (kwh/yr)	Credit/Reimbursement
<b>Heating Zone 1</b>				
Single Family Low-Income Class 30 Prime Replacement Windows - Single Pane Base	Single Family	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single pane with wood or metal frame.	27	\$ 8.07
Single Family Low-Income Class 30 Prime Replacement Windows - Double Pane Base	Single Family	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single or double pane with wood or metal frame.	19	\$ 5.67
Multifamily Low-Income Class 30 Prime Replacement Windows - Single Pane Base	Multifamily	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single pane with wood or metal frame.	15	\$ 4.52
Multifamily Low-Income Class 30 Prime Replacement Windows - Double Pane Base	Multifamily	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single or double pane with wood or metal frame.	11	\$ -
Manufactured Home Low-Income Class 30 Prime Replacement Windows - Single Pane Base	Manufactured Home	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single pane with wood or metal frame.	24	\$ 7.25
Manufactured Home Low-Income Class 30 Prime Replacement Windows - Double Pane Base	Manufactured Home	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single or double pane with wood or metal frame.	17	\$ -
<b>Heating Zone 2</b>				
Single Family Low-Income Class 30 Prime Replacement Windows - Single Pane Base	Single Family	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single pane with wood or metal frame.	35	\$ 10.65
Single Family Low-Income Class 30 Prime Replacement Windows - Double Pane Base	Single Family	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single or double pane with wood or metal frame.	25	\$ 7.49

## Attachment B

Measure	Building Type	Delivery Mechanism or Program	Annual Savings @ Busbar (kwh/yr)	Credit/ Reimbursement
Multifamily Low-Income Class 30 Prime Replacement Windows - Single Pane Base	Multifamily	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single pane with wood or metal frame.	25	\$ 7.48
Multifamily Low-Income Class 30 Prime Replacement Windows - Double Pane Base	Multifamily	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single or double pane with wood or metal frame.	18	\$ 5.26
Manufactured Home Low-Income Class 30 Prime Replacement Windows - Single Pane Base	Manufactured Home	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single pane with wood or metal frame.	33	\$ 9.90
Manufactured Home Low-Income Class 30 Prime Replacement Windows - Double Pane Base	Manufactured Home	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single or double pane with wood or metal frame.	23	\$ 6.96
<b>Heating Zone 3</b>				
Single Family Low-Income Class 30 Prime Replacement Windows - Single Pane Base	Single Family	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single pane with wood or metal frame.	42	\$ 12.57
Single Family Low-Income Class 30 Prime Replacement Windows - Double Pane Base	Single Family	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single or double pane with wood or metal frame.	29	\$ 8.84
Multifamily Low-Income Class 30 Prime Replacement Windows - Single Pane Base	Multifamily	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single pane with wood or metal frame.	29	\$ 8.85
Multifamily Low-Income Class 30 Prime Replacement Windows - Double Pane Base	Multifamily	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single or double pane with wood or metal frame.	21	\$ 6.22
Manufactured Home Low-Income Class 30 Prime Replacement Windows - Single Pane Base	Manufactured Home	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single pane with wood or metal frame.	39	\$ 11.77
Manufactured Home Low-Income Class 30 Prime Replacement Windows - Double Pane Base	Manufactured Home	Prime windows must have an NFRC rated U-factor of 0.30 or lower. Patio doors must have an NFRC rated U-factor of 0.35 or lower. Existing window must be single or double pane with wood or metal frame.	28	\$ 8.28

## **Attachment C: Fundamental Requirements Related to Federal Due Diligence**

### **C5.0 Fundamental Requirements Related to Federal Due Diligence**

The purpose of this section is to apply, to the terms of the CRC and CAA agreements, the following standard provisions as a minimum for implementation of the credit/reimbursement initiatives for the purposes of meeting the federal governments requirements for due diligence in the expenditure of federal funds and the dedication of federal staff.

#### **C5.1 Purchase of Energy Savings**

- c. The utility shall abide by all the pertinent provisions of this document and all applicable Power Sales Agreement provisions including sections for notices, uncontrollable forces, governing law and dispute resolution, and standard provisions (i.e., sections pertaining to amendments, assignments, information exchange and confidentiality, no third-party beneficiaries, waivers, sever ability, hold harmless sections), and termination provisions unless otherwise directed in this section or in subsequent conservation agreements. the power sales provisions regarding uncontrollable forces, which apply to both parties for contract power obligations, also apply to the parties' conservation obligations.
- d. This commitment applies to the utility and any applicable utility sub-contractors, contracted third parties and contract staff responsible for a portion, regardless of percentage, of time worked related to the implementation, management, record keeping, or any other related involvement of the utility activity funded through BPA credit/reimbursement.
- e. BPA shall not be obligated to pay for energy savings from measures/projects/completed units prior to the implementation date of the CRC or a CAA agreement or delivered after these initiatives end or after the implementation period unless otherwise specified in an agreement.

#### **C5.2 Other Sources of Funding**

- a. The utility may use only one BPA funding source for specific measures/projects/units to achieve savings.
- b. BPA will not pay for any portion of the cost of a project under BPA agreements where those costs have been or will be reimbursed, received payment for, or otherwise given credit under any other BPA or other federal contract or financial assistance agreement.

#### **C5.3 Reporting**

- a. The utility shall submit reports to BPA using the PTR reporting system as defined in section 1.9.

- b. All reports can include only measures with completion dates within the performance period specified. Completion dates are for completed units/measures or approved completion reports.
- c. The utility shall retain all supporting documentation for each submitted report.
- d. Documentation retained by utility for each submitted report should clearly indicate the reporting period and the report to which they are associated.
- e. Should there be a disagreement regarding a submitted report, BPA and Utility agree to work together to correct errors in the report and any revisions shall be included on the revised report. The Parties shall make reasonable efforts to make adjustments as soon as possible after BPA's receipt of the report. See Disputes section of the Power Sales Agreement for all other applicable dispute resolution provisions.

### **C5.4 Suspension and Withholding Payment**

- a. BPA and utility agree to an immediate suspension of any measure, which presents a significant environmental, health, or safety threat to Consumers. Such a determination by either Party must be preceded by a reasonable investigation.
- b. BPA shall not accept a report for credit/reimbursement for any suspended measure during the suspension period. The utility shall remedy or take actions agreed to by the Parties to correct the environmental, health or safety threat to Consumers. The utility shall have a number of days as agreed to in writing by BPA, to remedy or complete the corrective actions. The utility will notify BPA when the remedy or corrective actions are complete. BPA shall review the corrective actions and make a determination on lifting the suspension. BPA will notify the utility of its determination. If the suspension is lifted by BPA, the utility may begin implementation of the Agreement with the changes required by BPA under its determination.
- c. If BPA determines the utility's implementation of any Agreement under CRC or CAA is not in compliance with the environmental, technical, or record-keeping requirement, BPA shall provide a written notice to the utility suspending implementation of all or specific activities in cover under the appropriate Agreement and identify the specific nature of the noncompliance. BPA will provide comments on what activities are required to bring the activity into compliance. BPA shall not accept reports for any measure implemented under a suspended activity.
- d. If BPA suspends a utility activity as noted in "c" above, the utility shall have a number of days as agreed to in writing by BPA, to correct the noncompliance identified and notify BPA when the corrective actions have been completed. BPA shall review the corrective actions and make a determination on lifting the suspension. BPA will notify the utility of its determination. If the suspension is lifted by BPA, the utility may begin implementation of the Agreement with the changes required by BPA under its determination.

- e. If the utility does not completed the remedy or corrective actions required then BPA may terminate the appropriate Agreement.
- f. The utility shall bear the costs of Agreement compliance.

### **C5.5 Termination**

- a. The utility has the right to terminate Conservation Agreements upon no more than 60 days written notice, or as defined in specific contracts. The utility shall have one year from the effective date of termination pursuant to this section to complete Work in Progress, unless otherwise negotiated in subsequent agreements.
- b. BPA may terminate a CRC Agreement when:
  - 1. The utility has failed to comply with the environmental, technical, or record-keeping requirements; or
  - 2. The utility has failed to comply with the guidelines/manual requirements. Including progress toward targets as described in Section 2.11 – Performance Reviews and Remedies.
  - 3. The utility becomes insolvent, files a petition for bankruptcy or reorganization, or assigns substantially all assets to creditors and/or consequently BPA no longer serves the utility's loads.
- c. The utility and BPA may not include in termination "Work in Progress" where the completion period occurs beyond the effective date of termination.
- d. If an Agreement is terminated in accordance with this section, the utility may not report measures/projects/units for credit/reimbursement for "Work in Progress."

### **C5.6 Environmental Provisions**

- a. BPA, in the performance of Agreements, must comply with all obligations pursuant to the National Environmental Policy Act, therefore:
- b. Both Parties agree to:
  - 1. Comply fully with all applicable environmental laws and regulations;
  - 2. Assist and cooperate with meeting all environmental obligations, to the fullest extent economically and technically practical and mutually agreeable; and
  - 3. Provide, upon request of the other Party, a copy of the pollution abatement plans as required by the Clean Air Act, by the Clean Water Act, by other federal statutes, or by an agency having jurisdiction and within a reasonable time submit evidence such plans have been approved or have not been objected to by agencies with jurisdiction.

### **C5.7 Standard Provisions**

- a. The Information Exchange and Confidentiality section of the Power Sales Agreement is expanded for the purposes of this agreement to include BPA's obligations under the National Operations Security Program (OPSEC).

- b. For CRC: the CRC Conservation Agreement includes all pertinent provisions related to CRC or those applicable to both funding initiatives, included in document, including appropriate appendixes. For CAA: The CAA Conservation Agreement incorporates appropriate provisions from this manual and is the single source of the commitment between the Parties.

### **C5.8 Liability**

The utility agrees BPA has no responsibility for production of energy savings under the Agreements.

### **C5.9 Governing Law and Dispute Resolution**

All agreements pursuant to this document shall be interpreted consistent with and governed by Federal law. The parties shall make a good faith effort to negotiate a resolution of any and all disputes before initiating litigation. Should reasonable negotiation fail, both parties agree to dispute resolution processes as defined the current BPA and Utility Subscription Contract.

### **C5.10 Notices**

Any notice required under this agreement shall be in writing and delivered:

- a. In person;
- b. By a nationally recognized delivery service;
- c. By United States Certified Mail; or
- d. By electronic mail to e-mail addresses that are designated at the time agreements are signed.

Notices are effective when received. Either Party may change its address for the purposes noted above by giving notice of such change in the manner noted above.

**Attachment D: Final Post-2006 Conservation Structure  
(6/28/05)**

**Energy Efficiency  
Bonneville Power Administration  
Final Post-2006 Conservation Program Structure**

This document describes BPA’s final Post-2006 Conservation Program structure. A companion document, “Response to Key Issues Raised in Public Comment Process,” summarizes the key issues raised in the 56 public comment letters and e-mails BPA received regarding BPA’s Post-2006 Conservation Program Proposal. The companion document also summarizes BPA’s final decisions on these key issues that are incorporated into this final program structure. This document is organized as follows.

**Section I: Introduction.** The program purpose and BPA’s strategic direction are described in this section. The five-year (FYs 05 – 09) aMW targets are identified. The five program principles that were included in BPA’s Final Record of Decision on the short-term Regional Dialogue Policy are described along with seven key policy directives that help frame the post-2006 conservation programs. Finally, the timeframe anticipated for implementation of these final programs is explained.

**Section II: Program Portfolio and Structure.** This section includes a description of the portfolio of programs followed by a more detailed description of program design features for each of the four portfolio components: a rate credit; utility and federal agency customer bilateral contracts; third-party contracts; and regional infrastructure support. Features that are consistent across all programs are identified up front. Oversight requirements and tracking and reporting activities are described in Appendix 1 and the small utility option for the rate credit program is described in Appendix 2.

*Appendices:*

1. Sample of BPA Reporting, Oversight, and Evaluation Requirements.
2. Small Utility Option under the Conservation Rate Credit

**I. Introduction**

**Purpose**

The purpose of this document is to describe the portfolio of programs that BPA will offer during the 2007 through 2009 timeframe and through 2011 (pending the outcome of post-2009 rate case decisions and/or future long-term power sales contract requirements). BPA anticipates that this portfolio will: (1) facilitate BPA’s ability to achieve its share of the regional conservation targets as defined by the Northwest Power and Conservation Council’s (Council) Fifth Power Plan; (2) enable BPA to achieve its strategic objective described below; and (3) provide consistency with BPA’s Regional Dialogue policy decisions. In addition, the seven BPA policy directives described below provided supplemental guidance to the portfolio design.

### Strategic Direction

Strategic Objective 3: BPA ensures development of all cost-effective energy efficiency in the loads BPA serves, facilitates development of regional renewable resources, and adopts cost-effective non-construction alternatives to transmission expansion.

**Explanation of S3**: BPA will continue to treat energy efficiency as a resource and define our goals in terms of megawatts of energy efficiency acquired. Even if we adopt tiered rates, we are very likely to continue to need limited amounts of new resources. We expect conservation to continue to be a cost-effective resource to meet this limited need, with first priority by law. Accordingly, our goal is to continue to ensure that the cost-effective conservation in the load we serve gets developed, since this amount is very unlikely to exceed our total need. We will ensure this amount is developed with the smallest possible BPA outlay. We will do this through a combination of acquisition of conservation, adoption of policies and rates that support others' development or acquisition of cost-effective conservation, and support of market transformation that results in more efficient electric energy use.

### Program Principles

The following five conservation principles were included in BPA's Final Record of Decision on the short-term Regional Dialogue Policy (dated February 2005). They provide the framework for future conservation program design purposes.

- **Conservation Targets from Council's Plan**: BPA will use the Council's plan to identify the regional cost-effective conservation targets upon which the agency's share (approximately 40 percent<sup>10</sup>) of cost-effective conservation is based.
- **Conservation Achieved at the Local Level**: The bulk of the conservation to be achieved is best pursued and achieved at the local level. There are some initiatives that are best served by regional approaches (for example, market transformation through the Northwest Energy Efficiency Alliance). However, the knowledge local utilities have of their consumers and their needs reinforces many of the successful energy efficiency programs being delivered today.
- **Achieve Conservation at Lowest Cost Possible to BPA**: BPA will seek to meet its conservation goals at the lowest possible cost to BPA. While only cost-effective measures and programs are a given, the region can benefit by working together to jointly drive down the cost of acquiring those resources.
- **Administrative Support**: BPA will continue to provide an appropriate level of funding for local administrative support to plan and implement conservation programs.
- **Funding for Education, Outreach and Low-Income Weatherization**: BPA will continue to provide an appropriate level of funding for education, outreach, and low-

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<sup>10</sup> Based on the FY03 White Book information.



income weatherization such that these important initiatives complement a complete and effective conservation portfolio.

In addition to the five approved principles listed above, BPA's Post-2006 Conservation Program Structure is guided by the following key policy directives:

- **Benefits Must Flow to BPA:** BPA must realize directly the benefit of the savings achieved from the conservation acquisition programs it funds. (Note: the decrement will only be required in conjunction with slice/block customers' bilateral acquisition agreements and in some third-party contractor programs, as appropriate and with utility agreement.)
- **Cost-Effective Measures:** BPA will only pay for cost-effective measures as defined in the Council's Power Plan.
- **Accountability:** BPA needs to be sure it is getting what it pays for -- incremental, reliable and verifiable conservation savings. Measurement and verification will be included in all program mechanisms. This will include managing performance risks upfront such that BPA will avoid any need to "backstop" underachievement.
- **Tracking Progress:** BPA will monitor and report, on a regular basis, how our utilities and other parties are spending the conservation funds it provides across all components of the conservation portfolio.
- **Flexibility:** BPA will retain flexibility to shift budgets and targets across all program elements of the conservation portfolio and across program years to ensure the Council's target is met at the lowest cost possible.
- **Leveraging and Coordination:** BPA will coordinate and synchronize its efforts with those of others as part of an effective and efficient regional effort to achieve cost-effective conservation.
- **Local Control:** BPA will foster local utility initiative and control of conservation efforts to the maximum extent it can, consistent with meeting cost and verification goals.

### Timeframe

It is anticipated that this program structure will be implemented for BPA's FYs 2007 to 2011 period. However, new power sales contracts and/or post-2009 rate case decisions may require that elements of this program structure be adjusted. This program approach will be ready for implementation on or before October 1, 2006. BPA will allow customers that have used all their C&RD credits and have filed a final closeout report to spend their funds under the new rate credit starting in calendar year 2006 (targeted for January 1, 2006) and to claim spending on approved, cost-effective measures when the new rate credit kicks in (October 1, 2006). This approach will require customers to indicate their willingness to participate in the new rate credit program (should it be

approved in the rate process) and follow the implementation rules as defined by BPA. Only qualified ECMs implemented after the customers have satisfied their C&RD obligations and indicated to BPA that they want to begin the new program will be allowed. (*Note: There is a risk to utilities if they begin before the new rates are finalized. This is similar to the risk some utilities assumed when they started their rate credit conservation activities early in 2001 before the start of the current rate period.*) BPA will include a mechanism or procedure for customers to discontinue participation in the rate credit. However, should they choose to discontinue participation, they will have to pay the full PF or appropriate power rate, including the 0.5 mill adder, for the remaining portion of the rate period.

BPA will offer new bilateral contracts for execution by customers in the fall of 2005 (targeting October 1, 2005). Customers may choose to close out current ConAug contracts and transition to new bilateral conservation acquisition agreements. Customers can begin implementing projects and receiving reimbursement from BPA under the new contracts (with modified terms and incentive levels) once the new contracts have been executed. However, commercial and industrial projects already purchased or approved under ConAug will be subject to the current ConAug incentive levels and contract terms. Payment for projects under the new bilateral contracts can only occur after the execution date for the new agreement. BPA believes this approach will allow BPA to maximize the use of existing rate period conservation budgets to facilitate achieving the higher targets presented in the Council's Fifth Power Plan.

**Commitment to Achieving the Target:** BPA believes it is important to maintain a steady level of support for conservation over time and will continue to provide a strong energy efficiency program with a firm commitment to achieving its share of the Council's conservation target. This commitment has been demonstrated in the current rate period. BPA more than quadrupled its budget for installing energy conservation measures and capturing conservation savings from about \$15M in 2001 to over \$70M in 2002. Since that substantial increase in funding for conservation, BPA has maintained a high level of support for delivering conservation savings each year. In the 2007-09 rate period, BPA proposes to continue this support and increase the funding level from about \$70M/year, on average, to \$80M/year, on average.

### **Program Portfolio and Structure**

#### **Program Design Features**

BPA's Post-2006 Conservation Program is a portfolio of programs and supporting activities designed to achieve BPA's share of the regional cost-effective conservation target (as identified by the Council's Fifth Power Plan). The portfolio includes: (1) a rate credit program; (2) utility and federal agency customer acquisition program; (3) third-party acquisition initiatives; and (4) support for regional infrastructure necessary to effectively carry out the other portfolio elements. Options are provided under the rate credit program for small utilities. In addition, under the rate credit program, a renewables alternative is provided.

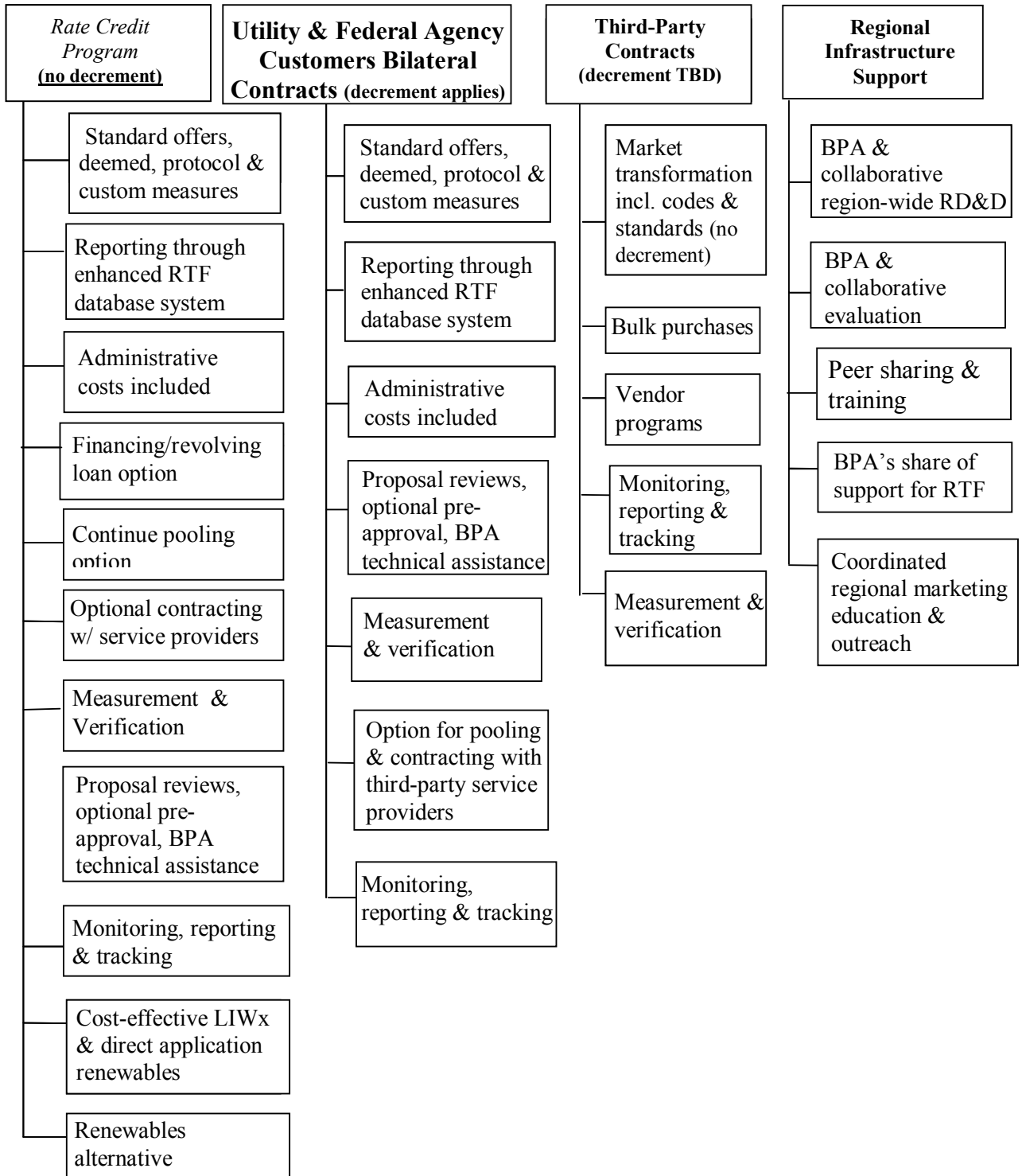
The program portfolio is shown in the following chart and explained in further detail in the remainder of this document.

### Post-2006 Conservation Program aMW Targets

Based upon the Council's Fifth Power Plan, there is a regional conservation target over the 2005-

2009 period of about 700 aMW. BPA's responsibility to achieve its share of this regional target is based on the amount of regional firm load that BPA supplies with federal power. BPA estimates that it is responsible for about 40 percent of the 700 aMW or 280 aMW. While this amount equates to an annual target of 56 aMW, BPA will adjust the amount of its target to take

**BPA's Final Post-2006 Conservation Program Structure**



into account the estimated amount of “naturally occurring” conservation (about 7 percent or 4 aMW/year). This results in an average annual conservation target of 52 aMW/year for a total of 260 aMW over the 2005-2009 period. BPA will increase its near-term conservation targets for the 2005-09 period, rather than the originally proposed 2007-11 period. This change reflects an adjustment and commitment by BPA to align the new conservation targets with the same five-year planning horizon in the Council’s Fifth Power Plan. BPA expects to meet its 2002-06 target (220 aMW averaging 44 aMW/year) by the end of FY 2006. To meet the 52 aMW/year target in 2005 and 2006 (i.e., an additional 8 aMW/year from the Council’s new target), BPA will seek to acquire an additional 16 aMW in 2006.

BPA will conduct an evaluation to estimate the accuracy of this assumption about naturally occurring conservation and whether the assumption should be modified going forward. BPA’s commitment is to ensure development of the five-year target, recognizing that there will be variations in the pace of the delivered savings on an annual basis.

As indicated in the March 28 proposal, BPA will count all conservation savings achieved with its funds toward the new target. For example, BPA will count 50 percent of NEEA’s conservation acquisition towards BPA’s targets since BPA provides 50 percent of NEEA’s funding. BPA will also count the conservation savings that result from IOU rate credit expenditures.

### **Eligibility**

All BPA customers (including the IOUs), with the exception of the aluminum-related DSIs, will be eligible to participate in the rate credit program. All BPA preference and federal agency customers will be eligible to participate under the bilateral contract program.

### *Incremental Requirements*

BPA’s conservation funding must be used by our customers for energy efficiency savings and related activities beyond what they are required by state law and/or regulatory requirements to accomplish. A public utility board of directors decision to pursue a particular conservation program, for example, would not, in itself, make that funding non-incremental.

### **Decrement**

BPA believes, as stated in the original proposal, that decrementing is necessary to minimize cross-utility subsidies and to ensure that the benefits from conservation flow to BPA and its customers. BPA will continue its current practice of not decrementing the slice/block or participating IOU customers under the rate credit program, but will continue requiring a load decrement for these customer groups in conjunction with the bilateral contracts program. The decrement will not apply to the NEEA contract. Whether or not the decrement applies to other third-party contracts involving slice/block customers will be determined on a case-by-case basis. Customers will be asked if they

want to participate in any third-party program in their service area. Customers will be informed if a decrement applies to the program at the time they are asked.

This approach continues the policy we currently apply and ensures that BPA realizes a load reduction from the conservation BPA pays for and that BPA and its customers see the full benefit from the conservation acquisitions. For the rate credit program, this approach, while not resulting in a BPA load reduction, reduces a barrier to utility participation in BPA's conservation programs and is consistent with the Conservation Workgroup's recommendations. However, BPA does not believe this approach is consistent with how conservation should be acquired, so the decision to not decrement the rate credit program for the 2007-09 rate period is not meant to set any precedent for future conservation program activities post 2009.

BPA considers this strategy, along with the change to pay only for cost-effective measures, a positive step toward BPA's goal of achieving cost-effective conservation at the lowest possible cost.

### **Renewables Alternative**

Under the rate credit program, eligible customers can choose to use their credits for qualified renewable resource related activities. BPA will require a three-month advance notice prior to each year of the rate period (2007-09) with a \$6M/year cap that will be pro rated if customers over subscribe. Small utilities (7.5 aMW and under) and BPA's federal agency power customers will be exempt from this *pro rata* requirement. This is intended to provide sufficient advance notice to BPA regarding the amount of rate credit and thus aMW that will be achieved with the rate credit funds, and provides additional flexibility for customers that manage their rate credit on an annual basis. A list of eligible renewable measures will be distributed for public review and comment prior to the start of the new rate credit program.

### **Budget**

BPA's annual budget (capital and expense) for acquiring the target of 52 aMW/year is \$80 million (see Table 1). BPA has an additional \$6 million per year from BPA's Generating Renewable Program Fund for renewables. For the 2007 – 2009 rate period, the rate credit will be \$0.0005/kWh (1/2 mill) on utility-purchased power from BPA and the equivalent treatment for IOU residential benefit payments. This equates to roughly \$42 million (including participation by pre-subscription contract holders and IOUs). BPA anticipates that \$6 million per year will be spent on renewable resource related initiatives. As shown in Table B-1, BPA will pay a weighted average of \$1.5 M/aMW (which includes a 15 percent administration allowance for the rate credit and bilateral contracts programs) across the entire portfolio of programs.

**Table B1: Program Annual aMW Targets and Budgets**

<b>Program</b>	<b>aMW</b>	<b>Budget</b>	<b>Cost/aMW</b>
Rate Credit (at 0.5 mills = \$42M*/year with IOUs and Pre-Subbers included)**	20	\$36M	\$1.8M
Utility & Fed. Agency Bilateral Contracts**	17	\$26M	\$1.5M
Third- Party Contracts	5	\$7M	\$1.4M
Market Transformation (via NEEA)	10	\$10M	\$1.0M
Infrastructure Support and Evaluation	---	\$ 1M	---
<b>Total</b>	<b>52</b>	<b>\$80M</b>	<b>\$1.5M</b>

\*Assumes \$6M/year of the \$42 M/year from a separate renewable budget will be spent on renewables.

\*\*Includes a 15 percent administration allowance.

**Features Consistent For All Programs**

There are several features that will be consistent across all of the conservation programs:

- BPA will pay only for qualified cost-effective measures from the RTF list as defined by the Council’s Fifth Power Plan, as well as for approved calculated and custom program designs, and for additional deemed measures that are approved throughout the rate period.
- The list of qualified, cost-effective measures, deemed kWh savings and payment rate per measure will generally be consistent across programs. However, BPA retains the flexibility to negotiate custom agreements.
- BPA’s willingness to pay may vary by sector and measure, and will reflect the actual cost to acquire resources in each sector. It may also reflect program implementation realities.
- BPA’s will consider measure life in our determination of willingness to pay levels for specific measures.
- BPA will strive to simplify implementation by using averages that take advantage of measure similarity.
- Packaging of measures will be allowed, but BPA will only pay an amount equivalent to payment for the cost-effective measures in the package.
- BPA will attempt to minimize the frequency of adjustments to willingness to pay adjustments. For example, BPA may adjust payments with six months notice, if necessary, to compensate, for changes in codes, market prices, technology penetration or, if needed, to stay on pace with targets. Adjustments will apply to measures installed after the date the adjustment notice is effective. No retroactive adjustments will be applied.

- Utilities may request the RTF review the eligibility of new measures or measures previously deemed to not be regionally cost effective. If the RTF recommends the requested measures as cost-effective, BPA will review the RTF's recommendations to determine whether or not BPA will pay an incentive for the measure.
- Semi-annual reporting will be required.
- BPA retains the flexibility to shift funds between programs and program elements, and across fiscal years as needed to ensure the conservation targets are achieved at the lowest cost possible.
- Oversight and verification will be similar to the current requirements under the ConAug program. Participating utilities will be required to support evaluations (see Appendix 1).
- Information on individual utility expenditures and achievements resulting from BPA funding will be made available to the public, as appropriate.

### Rate Credit Program

#### Overview

A rate credit will be established to facilitate local development of conservation. The aMW purchased with rate credit money will be counted towards BPA's aMW target. Load forecasts will not be reduced and no decrement off block or slice will be required. If IOU's participate, they will participate under the same rules and conditions that apply to all utilities. Utilities will make a commitment to BPA if they plan to participate in the rate credit program no later than three months prior to the start of the rate period (program start October 1, 2006; notification to participate required by July 1, 2006). The utility will make the commitment by submitting a letter to BPA that states that the utility will participate and that the utility agrees to abide by the program rules as documented in the appropriate GRSPs and the Implementation Manual. If a utility chooses to discontinue participation, the utility must provide BPA notice no later than July 1 for the following October 1 to September 30 fiscal year period. A Rate Credit Implementation Manual, similar to the existing C&RD Implementation Manual, will be prepared and distributed approximately six months prior to program implementation and three months before utility commitments to the rate credit are required. An overview of this program is shown on the chart. Key features of this proposed program include:

#### Key Features

- Customers may choose to be reimbursed from the rate credit for administration costs at a rate of up to 15 percent of the customer's eligible annual rate credit.
- Monthly credit amount is equal to the forecasted eligible annual credit/12.
- Each utility may choose the incentive level to pay the end user but is credited only the amount BPA offers for each cost-effective measure.
- Rate credits will be provided for qualified deemed, deemed calculated, custom/protocol projects and standard offers.
- BPA engineers will provide custom proposal reviews to the extent engineering resources are available



- Utilities will report at least semi-annually to BPA via the RTF reporting system. If, at the second semi-annual report (end of the first full year of the program), the utility is not meeting its targets (50 percent or less of its expected rate credit spending), the utility will have to prepare and have BPA approve an Action Plan that provides sufficient proof of achievable intent by the end of the first year after the program starts (10/1/07). BPA staff will be available to assist utilities in developing an Action Plan that will indicate how the utility will spend its rate credit funds by the end of the rate period (9/30/09). BPA's goal is for every participating utility to spend the full amount of its rate credit on qualified conservation and/or renewables activities by the end of the rate period. If at the 18-month period (third progress report – 4/1/08) participants still have not made sufficient progress on their rate credit spending (i.e., 75 percent or less of their expected rate credit has been spent), then BPA may send a notification letter that the rate credit will be withdrawn for the third year of the program (i.e., customers will be required to pay the full PF or other appropriate power rate) so the funds can be reallocated. After the end of the third year of the rate credit program (9/30/09), there will be a final true-up required for participating utilities.
- The existing RTF web-based information and reporting system will be used. The RTF database will include all measures in the current C&RD database and the cost-effective measures for which BPA is willing to pay an incentive during the new rate period (FYs 2007-09). The reporting system will be enhanced to include means for utilities (at their option) to enter savings acquired from non-cost-effective measures, measures the utility pays for with its own money, and for identifying savings from lost opportunity measures.
- Measurement and verification for non-deemed measures at a level similar to that done under the current ConAug program will be required (see Appendix 1).
- Utility records related to spending of BPA funds will be subject to federal financial review.
- BPA will conduct an annual oversight visit (see Appendix 1 for further detail).
- Pooling of utility funding is allowed (optional), but there will be a 15 percent cap on total administration costs for the pool.
- Utilities may contract independently with third-party service providers to operate their programs (optional).
- An annual commitment to renewables will be allowed (see earlier Renewables Alternative section).

### **Rate Credit Eligibility**

- Only qualified, cost-effective conservation and direct application (customer side) renewable measures will be eligible for a rate credit and renewables option.
- There will be a no cap on the total dollars in the rate credit program that a utility may either contract to low income weatherization organizations or spend on utility low income programs. No double counting of savings will be allowed, and utilities may not claim administration costs on the amount of money contracted or passed through.
- Third party subcontracts with energy organizations will be allowed provided cost-effective aMW savings result. Utilities may not take administration payments on pass-through contracts. BPA will include these funds in determining its share of the NEEA aMW achieved and will count these aMWs toward BPA's target.

### Small Utility Option

#### Overview

Small utilities are defined as those with a 7.5 aMW or smaller total load. BPA wants to make participation in the rate credit feasible for small utilities, while ensuring that dollars actually go to cost-effective conservation and renewables. Small utilities will be required to acquire cost-effective measures (or renewables) in order to participate in the rate credit program. BPA will allow up to 30 percent of their rate credit for administrative costs, ensure that small utilities who wish to spend their rate credit dollars on renewables can do so without being affected by a *pro rata* adjustment if renewables are over subscribed by customers (exceed the \$6M/year cap), provide a checklist of simple programs and initiatives suitable for a small utility to implement, and modify the performance reporting requirements to align more with their capabilities. More detail on these changes is included in Appendix 2.

### Utility and Federal Agency Bilateral Contracts Program

#### Overview

BPA anticipates this bilateral program component of the program portfolio to be a five-year program and is committing funding for a three-year period (2007 through 2009). This program is needed because the conservation resources are not evenly distributed across the region. BPA may shift money between the bilateral contract and other programs in the portfolio, as appropriate.

Streamlined, standardized umbrella agreements will be written with interested utilities (participation is optional). Similar to the current ConAug program, each agreement will have exhibits that provide specific program details. Utilities can select from available program exhibits to customize the selection of programs best suited to their service territory. BPA will fund both standard offer and custom designed programs. BPA (or its designated contractor) will conduct oversight. BPA will make a budget commitment to the utility for the duration of the contract subject to utility performance. Similar to the current ConAug program, BPA (or its designated contractor) will provide limited engineering assistance for project scoping and, if requested, pre-approval of projects. The proposed Utility and Federal Agency Bilateral Program is an acquisition program and, as such, the decrement will apply to all slice/block customers. Key features of this proposed program include:

#### Key Features

- Reimbursement of administration costs at a rate up to 15 percent of the allowable costs may be included with the project budget and reimbursed by BPA.
- Each utility may choose the incentive level to pay the end user but is credited only the amount BPA offers for each cost-effective measure.
- BPA engineers will provide custom proposal reviews to the extent engineering resources are available.

- Measurement, verification and oversight will be similar to that done under the current ConAug program.
- Incentives will be provided for qualified deemed, standard offers and custom/protocol projects.
- BPA will explore augmenting the existing RTF database to allow bilateral contract reporting -- so that tracking for both programs will be through the same database. Invoicing for BPA payment will be separate.
- Stranded cost repayment provisions will be put in place between each participating utility and BPA.
- BPA will strive to provide simplified contracts.
- BPA will strive to provide a streamlined approval process

### **Measure Eligibility**

Only qualified cost-effective conservation and direct application (customer-side) renewable measures will be eligible.

### **Third-Party Contracts**

#### **Overview**

This third-party contract component of the program portfolio will allow BPA to contract to third parties when these contracts will lower the cost of acquiring conservation or where needed to affect markets that cannot be changed at a local level. BPA will only pay third parties to work in utility service territories that have agreed to participate in the third-party program. This policy of requiring pre-approval of utility partners is a continuation of BPA's current policy. In general, regional programs will be designed to operate in coordination with local utility programs. For example, regional bulk purchases of a technology might be delivered locally. BPA anticipates transferring funds between third-party contracts and utility and federal agency bilateral contracts, as needed, to balance the level of effort needed at both the regional and local levels and to achieve the targets at the lowest possible cost.

Pre-committed funding for NEEA (\$10 million per year for the 2007-09 period) is included in this mechanism and no decrement will be applied for the NEEA contract.

#### **Key Features**

- BPA will negotiate reasonable administration costs for third-party contracts.
- Region-wide programs and efforts will be coordinated with local utilities.
- The decrement will not apply to NEEA.
- A determination of whether or not a decrement applies for other third-party programs will be determined on a case-by-case basis.
- Customers will be notified as to whether or not a decrement will apply to any third-party program of interest to the utility before the utility agrees to participate.

### Infrastructure Support

#### Overview

A number of proposed support activities will be undertaken to optimize expenditures through BPA's energy efficiency programs, to leverage other available resources and to reduce the overall cost of accomplishing the conservation. These activities may include:

- Setting up a mechanism for peer sharing (e.g., so utilities can share successful program ideas and marketing materials).
- Conducting limited BPA and collaboratively funded RD&D to ensure we are developing the next wave of energy efficiency technologies.
- Performing evaluations (process and impact) and market assessments to ensure BPA's programs are achieving the intended result and to gather the information necessary to make mid-stream program adjustments. Co-funding from other affected organizations may be solicited for these evaluations/assessments. BPA may also contribute to a regional evaluation designed to assess how much naturally occurring conservation has been achieved.
- Enhancing and supporting the RTF database to include expanding the reporting elements and Web site to allow bilateral contract acquisition reporting and tracking and to track lost opportunity acquisition.
- Developing, with utility guidance, tool kit components such as utility program marketing and implementation materials that utilities need and may choose to use to launch new programs.
- Developing templates and other program design "off the shelf" materials that small utilities can easily use.

#### Tracking and Reporting

BPA is upgrading the RTF/C&RD database to allow utilities to report both bilateral and rate credit program accomplishments in an on-line database. BPA will continue to rely on invoicing for reimbursement under bilateral agreements. BPA is also expanding the database to allow utilities to report conservation savings from other funding sources as well.

**Appendix 1**  
**Sample of Reporting, Oversight, and Evaluation Requirements**

**Reporting:**

Purpose: Tracking progress to meeting the regional goals in real time will be important if the region is going to be able to respond and adapt to shortfalls. In addition, the use of public funds requires a minimum level of accounting.

All utilities will report at least semi-annually, using the RTF database, on their accomplishments and expenditures of funds, whether from the rate credit or bilateral contracts. BPA will strive to have this single source of reporting meet as many needs as possible to avoid duplicative or inconsistent reporting needs. All data received will be in the public domain except where consumer business confidentiality is needed.

**Oversight and Verification:**

Purpose: The expenditure of funds included in the published BPA rates for purposes of achieving conservation (and renewables, if applicable) is an activity for which BPA has fiduciary responsibility. In addition, by providing constructive oversight, BPA may be able to provide assistance to utilities to improve the programs and reporting. BPA will aim to have one oversight visit per year for all of its conservation programs for each participating utility, unless major issues surface.

(a) Bonneville Power Administration (BPA) or BPA's agent shall have the right to conduct inspections of units or completed units and monitor or review a utility's procedures, records, verified energy savings method and results, or otherwise oversee the utility's implementation of conservation programs funded through dollars included in BPA's rates. The number, timing, and extent of such audits shall be at the discretion of BPA. Such site reviews are expected to be conducted annually. Such audits shall occur at BPA's expense. Financial audits shall be in compliance with the audit standards established by the Comptroller General of the United States. BPA may contact appropriate federal, state, or local jurisdictions regarding environmental, health, or safety matters related to units or completed units.

(b) Prior to any oversight visit physical inspection, BPA shall give the utility written notice. If physical inspections are required by BPA, the utility shall have 30 days to arrange for the inspection of units or completed units. The oversight visit will include: review of energy audit or measure installation procedures, technical documents, records, and/or verified savings methods and results.

**Evaluations:**

Purpose: Evaluations are needed to determine barriers to program success, identify ways to improve programs, help track program accomplishments, and to assess the market conditions, the accuracy of the savings estimates, and to answer the ultimate question of whether programs are meeting their expected goals.

- (a) BPA may conduct, and the utility shall cooperate with, evaluations of conservation impacts and project implementation processes to assess the amount, cost effectiveness, and reliability of conservation in the utilities' service areas or region. After consultation with the participating utilities, BPA shall determine the timing, frequency, and type of such evaluations.
- (b) BPA anticipates that many of the evaluations will be done collaboratively with other organizations to share costs and improve the usefulness of the evaluations. In some cases, this will result in the evaluation being managed by another party on behalf of BPA and others. Such evaluation contract management responsibilities might be shared with other parties, including among others, the NEEA, the RTF, the Power Council, the Energy Trust of Oregon, or another utility.
- (c) BPA will determine the specific requirements for evaluations with consideration for the schedules and reasonable needs of the utility and the utility's customers.
- (d) Unless requested by the program managers to improve program operation, any evaluation of the project initiated by BPA shall be conducted at BPA's expense or shared regional expense and such costs shall be excluded from the implementation budget. Utility or other entities that cooperate with the evaluation are implicitly recognized as providing some resource/cost, but will not be considered for direct reimbursement by BPA, except under unusual circumstances. Cooperation with the evaluation is a cost of the partnership in delivering the programs.

**Appendix 2**  
**Post-2006 Conservation Program:**  
**Small Utility Option under the Conservation Rate Credit**

BPA will continue to define small utility as those utilities with loads of 7.5 aMW or under. BPA intention is that small utilities acquire cost-effective conservation (or renewables) in order to receive the conservation rate credit (CRC). The following CRC Program elements will be available to small utilities:

- Up to 30 percent of a small utility’s CRC amount may be used for administrative costs, (which include information, education and outreach (marketing) efforts regarding energy efficiency).
- Only one BPA oversight visit will be required during the three-year CRC rate period (unless the utility requests a more frequent review).
- Only one report will be required during the three-year CRC rate period.
- Third-party (or utility pooling) to run utility conservation programs (using some or all of the 30 percent administrative allowance to pay the third-party) is allowed.
- Small utility customers can satisfy their remaining 70 percent CRC spending by implementing appropriate (to their service areas) cost-effective measures, such as:
  - CFL programs
  - Appliance Rebate programs
  - SGC Manufactured Homes program
  - Energy Star New Construction program
  - Other qualifying cost-effective measures and standard offers

However, if small utility customers don’t have sufficient opportunities to implement cost-effective measure programs with their end-use consumers, then the following options are available to help ensure that they will be successful in meeting their full CRC obligation:

- Donations for cost-effective measures to low income weatherization organizations with no cap (e.g., CFLs).
- Purchase of the renewables (with no *pro rata* adjustment if renewables are over subscribed ((i.e., exceed \$6M/year cap)) by CRC participants).
- Donations to NEEA (or other organizations that will use BPA’s funds to install cost-effective measures) with no cap.

BPA’s AEs and EERs are available to work with small utilities to develop a reasonable game plan for achieving CRC success under the new program requirements. BPA will continue to explore new program options for small utility customers.