Proposed Changes to the Renewable Rate Credit Program

This document describes the proposed implementation guidelines for the renewable option that will be part of BPA's Conservation Rate Credit Program for fiscal years 2007-2009. It includes a new section that will replace section 5 of the current Conservation and Renewables Discount Implementation Manual. This proposed section will become part of the new Post 2006 Conservation Program Implementation Manual for the FY 2007-2009 rate period. The rate components of this program will be established and made final when BPA's wholesale power rate-setting procedure is completed and approved. BPA is seeking comments on these proposed changes for the renewable option.

Background - Key Changes to the Renewable Rate Credit Program

Funding Level Capped. In response to broad customer support, BPA will continue to offer a combined conservation and renewable rate credit program during the 2007-2009 rate period. Over the next rate period, BPA plans to balance its efforts to achieve the conservation targets set by the Northwest Power and Conservation Council (Council) with customer requests to include a flexible renewable rate credit as part of the rate credit program. One result of the decision to provide customer flexibility in spite of the increased conservation targets is a proposed limit or cap on annual renewable claims made against the conservation rate credit program. If too much of the rate credit is consumed by renewable claims, there will not be sufficient funds to achieve the conservation targets (unless rates are raised). Therefore, the renewable claim limit will assure sufficient funds are available to achieve conservation targets.

In order to meet the conservation targets, provide flexibility and prevent further rate increases, BPA will cap total renewable rate credit claims at $6 million per year. The $6 million/year cap was chosen because it roughly equals average renewable rate credit claims made during FY 2001-2004 and allows customers to continue with approximately the same level of renewable spending as they have had historically. Another change related to the cap: the renewables program budget will annually repay the conservation program for renewable claims made against the conservation rate credit program.

There are several ways to limit renewable claims to $6 million/year (for example, on a first come, first served basis, lottery, customer class preference, etc.). BPA believes the most equitable way to limit total annual renewable claims to $6 million/year is by applying an annual pro rata reduction to all renewable claims if total claims exceed $6 million in any single year. BPA will exempt small utility customers (7.5 aMW load or less) and federal customers from the prorated reduction since these customers generally have less flexibility in their budgets and would be most impacted by a pro rata reduction.

BPA considered continuing the existing production-based credit using actual generation, with higher amounts going to New Facilities than to Existing Facilities. However, the short rate period, the $6 million cap, and ensuing pro rata reductions combine to create risk/uncertainty for all, especially for New Facilities energized later in the rate period. If we choose to continue with the existing production-based credit, we would need to significantly reduce the amount of credit awarded to Facilities to prevent the $6 million dollar cap from being exceeded in years two and three of the rate period (due to the additive/cumulative effects of more generation coming on-line over time).

A generation-based production credit for both Existing and New Facilities would create an advantage for Existing Facilities and is inconsistent with the objectives stated in section 5.2. To offset the advantages Existing Facilities have over New Facilities, BPA is proposing to set the credit for New Facilities high enough to offset most of the costs *for the first year of production* – regardless of whether the New Facility is energized the first or last year of the rate period. In addition, more flexibility and deference will be given to New Facilities compared to those that are already operating.

New Facility Credits will be fixed at the 2007 level for the 3-year rate period, with no adjustments for inflation or changes in the Flat Mid-C market price.

Existing Facilities redefined and the Existing Facility credit based on project-specific generation and integration costs. BPA observes there are potential inequities for accessing the rate credit between Existing Facilities and New Facilities. For example, given the cap, Existing Facilities could consume all of the $6 million renewable rate credit. On the other hand, disallowing Existing Facilities from the rate credit program would penalize early adopters. Allowing Existing Facilities to be credited at a fixed fraction of the New Facility rate was also considered but eliminated because some Existing Facilities are below market. Allowing these Existing Facilities to collect on the credit would allow some utilities to make money off of the rate credit program. This did not seem equitable, given the cap and rate pressure. BPA would like to keep credit claims on Existing Facilities to a minimum because every dollar going toward Existing Facilities is one less dollar going toward New Facilities. BPA believes that the most equitable way to treat Existing Facilities is to award credit based on Project Costs, and to cap that credit at an amount equivalent to what the facility would receive if it were a New Facility. Existing Facilities can claim credit for energy produced during all three years of the rate period rather than one year (New Facilities); therefore, the Existing Facility production credit will be capped at 33 percent of the appropriate New Renewable Energy Facility credit.

Existing Facility Credit will be determined by comparing Project Costs against the Proxy for Avoided Costs. Project Costs will be limited to independently certified FY 2007 contracted energy costs at the bus bar, and independently certified FY 2007 contracted integration charges (if applicable). Existing Facility Credits will be fixed at the 2007 level for the duration of the 3-year rate period without adjustments for inflation, changes in Project Costs, or market prices.

Link to Northwest Power and Conservation Council's Cost-Effectiveness. To assure cost-effectiveness and consistency with the Council's 5th Power Plan, the renewable rate credit will be capped at $27/MWh (except solar facilities). The $27/MWh figure reflects the value of 20 years

of CO^2 offsets on a net present value basis. This level of funding can be considered cost-effective as long as the Environmental Attributes are retired in the utility customer's service area.

Solar. Many customers asked that BPA include solar in the renewable rate credit because it was excluded from the conservation rate credit. BPA considered the fact that solar water heaters and solar PV prices continue to drop and conversion efficiencies continue to improve. BPA is proposing to include new solar water heaters and new PV installations in the renewable rate credit and to base their credit on a fraction of the value of the energy generated during the life of the project, rather than comparing to the Proxy for Avoided Cost.

Appendix A

Northwest Power and Conservation Council

August 11, 2005

MEMORANDUM

TO: Debra Malin, Bonneville Power Administration

FROM: Jeff King

SUBJECT: Electricity cost of new renewable energy projects

The electricity production costs shown below are calculated using the representative new generating resource assumptions of the 5th Power Plan, for the initial service years shown[1]. These are levelized lifetime values expressed in service year (then current) dollars per megawatt-hour. Key assumptions are described below and are generally consistent with the "benchmark" electricity production costs appearing in the 5th Power Plan. Geothermal costs are omitted because of the absence of reliable cost information; hydro costs are omitted because of the potentially significant variation among projects.

	Wood Residue (Power-only)	Wood Residue (Full CHP)	Landfill Gas	Animal Waste Biogas	Solar PV (<25kW)	Solar PV (25kW+)	Wind (<25kW)	Wind (Cluster)	Wind (Utility-scale)
Capacity factor	90%	90%	80%	90%	10%	15%	14%	30%	30%
2006	65	50	41	49	540	310	290	72	46
2007	68	51	42	51	500	290	270	73	46
2008	69	53	44	52	480	270	260	73	47
2009	71	55	45	54	450	260	250	74	48
2010	73	57	47	56	420	240	240	75	48

Financing: 5th Plan assumptions, 20% publicly-owned utility, 40% investor-owned utility, 40% independent.
Service life: 20 years, conforming to the CO^2 offset value described below.
Fuel: Wood residue - $1.00/MMBtu; Landfill gas - $0.15/MMBtu; Animal waste - no cost (all year 2000 dollars).

[1] The Cluster Wind example does not appear in the 5th Power Plan. The Cluster Wind electricity costs are based on project cost estimates appearing in the report A Comparative Analysis of Community Wind Power Development Options in Oregon of July 2004, prepared for the Energy Trust of Oregon. The costs and performance are representative of several utility-scale turbines installed at a prime wind site and interconnected to an existing near-by medium-voltage distribution or transmission line. The electricity costs for the Cluster Wind case were calculated using methods and assumptions comparable to the other cases.

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System integration: The power-only wood residue and landfill gas cases are assumed to sell to the market and incur 1.9% transmission losses and transmission costs of $15/kW/yr. The utility-scale wind case is also assumed to sell to the market and to incur 1.9% transmission losses, transmission cost of $20/kW/yr and shaping cost of $4.55/MWh. The cogeneration wood residue, animal waste biogas, photovoltaics and small scale wind cases are assumed to displace on-site load, subject to $2/kW/yr capacity service charge. The output of the cluster wind project is assumed purchased by the local utility that shapes the output through Bonneville or other third party. (Values are year 2000 dollars)
Federal production tax credit: Mean value of the portfolio analysis of the 5th Plan. (Levelized value of $5.49/MWh in year 2000 dollars; $6.53/MWh in year 2007 dollars.)
Renewable energy credits: Mean value of the portfolio analysis of the 5th Plan. (Levelized value of $3.71/MWh in year 2000 dollars; $4.41/MWh in year 2007 dollars.)
General inflation rate: 2.5%/year.

The estimated present value of the lifetime CO^2 offset benefits of a renewable energy project could be used to establish a credit cap. The values shown below were estimated for a project life of 20 years using the assumptions of the 5th Power Plan regarding the value of future CO^2 offsets. The AURORA market price model, set up for the base case wholesale power price forecast of the 5th Power Plan was used to develop the estimates. The value of the cap increases with the service year of the project because of the increasing probability and cost of CO^2 offsets during the life of the project. The estimated value of the cap by year of initial service is shown below in then-current dollars.

2006	$23/MWh
2007	$27/MWh
2008	$32/MWh
2009	$38/MWh
2010	$44/MWh

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