

**PUBLIC UTILITY COMMISSION OF OREGON
INTEROFFICE CORRESPONDENCE**

DATE: June 28, 2007

TO: Marc Hellman

FROM: Michael Dougherty

SUBJECT: Review of PGE's Renewable Resource Choices for 2005 through 2006

Summary

As a follow-up to Staff's Review of PGE's Renewable Resource Choices audit for 2004, the Program Manager, Resource and Market Analysis, requested OPUC Audit Staff to examine Portland General Electric's (PGE or Company) accounting of renewable resource portfolio programs for the years 2005 and 2006. The programs reviewed include the Clean Wind (Fixed Renewable) Program, the Green Source (Renewable Usage) Program, and the Habitat Option.

In performing the audit, Staff sent 25 data requests to PGE and conducted several telephone conversations with PGE personnel. Based on Staff's review, the programs appear to be properly administered and recorded by PGE.

Audit Objectives and Scope

1. To ensure the Renewable Resource Choices program was properly administered by PGE.
2. To ensure all costs associated with PGE's Renewable Choices costs were properly recorded by PGE.

Staff Recommendation to PGE and Program Staff

1. PGE and Program Staff should review the PGE payment structure (formula) to Green Mountain Energy (GME) for the TRCs as well as the historical trends on the actual target price of \$2.60/MWh set by PGE and GME to ensure the structure is equitable among the parties. (Page 6)
2. PGE should apply its authorized rate of return to the balance of the Healthy Habitat and Green Source Development Fund. (Page 6)

PGE's Renewable Resource Choices

In 2005 and 2006, PGE's residential and small business customers had a choice of three renewable resource portfolio options: the Clean Wind Option, Green Source Option, and Habitat Option.

Effective August 23, 2006, PGE received Commission approval for Schedule 9, Stable Rate Pilot, for service beginning January 1, 2007. The Stable Rate Pilot locks in customer rates for five years and 100 percent of the energy is supplied from the Klondike II wind farm near Wasco, Oregon. Since this rate schedule was not available for service in 2005 or 2006, Audit Staff did not review financial information concerning this pilot program. However, this program will be

reviewed in any subsequent audits concerning renewable resources. (Note: This stable rate tariff was closed to new customers effective June 1, 2007.)

Clean Wind (Fixed Renewable Option)

With Clean Wind, PGE's customers can purchase 200 kilowatt hour (kWh) "units" of Tradable Renewable Credits (TRCs)¹ from new renewable resources. Each unit costs \$3.50 per month above the Basic Service rate, and a customer can purchase as many units as desired. The first \$2.50 of the block payment is placed in the Clean Wind Development Fund (CWDF). Amounts in the fund are disbursed by the Company to public renewable resource demonstration projects or projects which commit to supply energy according to a contractually established timetable. The remaining \$1.00 is used for resource costs (TRCs).

To accommodate for timing differences between calendar months and billing cycles, the premium is allocated at 29 percent to purchase green tags and 71 percent to the CWDF.

Disbursements of the CWDF in 2005 and 2006 included costs of upgrades and repairs on PGE installed photovoltaic systems at several local schools to return the systems to a working status. In addition, PGE is establishing a website dedicated to providing information to customers on solar photovoltaic (PV) projects in PGE's service area.

In 2007, PGE has completed the installation of a 4 kW Solar Electric system supplemented by a 900 Watt micro-hydro system at the Opal Creek Ancient Forest Center in Marion County, Oregon, using funds from the CWDF. Additional 2007 projects include a large scale 800 kW Solar PV project in conjunction with The Portland Habilitation Center in Northeast Portland and another Solar PV installation at the East Portland Community Center in conjunction with the City of Portland Parks and Recreation Department.

The Company reports to the Commission annually by April 1st for the preceding calendar year on collections and disbursements of the fund. The fund accrues interest at the Company's authorized rate of return.² The balance of the CWDF as of December 31, 2006, was \$1,339,054. Accounting of revenues and disbursements of the Clean Wind Development Fund appear properly recorded by PGE.

Green Source (Renewable Usage Option)

In 2005 and 2006, PGE purchased on behalf of participating Green Source customers TRCs from electricity generated from renewable resources consisting of 50 percent new wind resources,

¹ Tradable Renewable Credits are the attributes associated with production of electricity from non-polluting renewable resources like solar, wind, biomass, hydro, or geothermal. The attributes are created when the electricity is produced for consumption in the electric system and the renewable attributes are sold separately or traded to meet regulatory requirements or for other purposes.

² In Staff's Review of PGE's Renewable Resource Choices for 2004, PGE was actually applying a 2 percent interest. Staff recommended and the Company agreed to apply its authorized rate of return. The change went into effect concurrent with the last rate case (UE 180).

25 percent existing geothermal resources, and 25 percent existing low impact hydroelectric power from existing resources.³ Low impact hydropower is power certified by the Low Impact Hydropower Institute to have been generated at dams that meet stringent standards to minimize the effect on rivers, fish, and wildlife.⁴

Electricity prices equal actual Basic Service billed plus \$0.008/kWh. A PGE customer that uses 1,000 kWh per month will pay an additional \$8.00/month for this option. This additional money collected from customers is used to pay service fees to Green Mountain Energy (GME) for power supply acquisition, supply development, and TRCs.

GME provides PGE marketing and training services with respect to portfolio options, TRCs, and product substantiation services to support the customer load for such portfolio options. Please see Tables 1 through 3 concerning PGE's payments to GME.

Habitat Option

The Habitat Option consists of the same renewable resources as Green Source plus a fixed \$2.50 monthly fee that is paid to *The Nature Conservancy* for salmon habitat restoration. PGE provided Staff with *The Nature Conservancy's* two most recent Biannual Reports to PGE and PacifiCorp concerning the Salmon Habitat Fund (February 15, 2007, and August 15, 2006).

Total PGE customer funds received by *The Nature Conservancy* through December 31, 2006, equaled \$577,453.⁵ *The Nature Conservancy* distributed \$272,378 of these funds as of December 31, 2006. Of the currently obligated funds, 76.91 percent of the PGE funds have been for projects within the PGE service territory; however, total obligated and distributed funds in PGE's service territory has been 57.75 percent.⁶

Approximately 80 percent of PGE customer funds to the Nature Conservancy were directed to subawards and grants for salmon habitat restoration. According to *The Nature Conservancy* report, approximately 66 percent of the total obligated and distributed funds from both PGE and PacifiCorp have gone to Watershed Councils, Soil and Water Conservation Councils, and local non-governmental organizations. Included in *The Nature Conservancy* Report is a listing of 33 project descriptions that have been partially funded through funds received from both PGE and PacifiCorp customers.

PGE has not performed an internal audit of the portfolio option funds regarding disbursements to Green Mountain Energy and The Nature Conservancy. However, PGE's 2007 Internal Audit Plan includes a scheduled audit project for "Renewables - residential program."

³ Beginning January 1, 2007, all renewable resource options use 100% new resources.

⁴ Please see www.lowimpacthydro.org.

⁵ This amount includes \$58,811 transferred from the previous provider of salmon restoration services, *For the Sake of the Salmon*.

⁶ The Nature Conservancy, *Portland General Electric and PacifiCorp Salmon Habitat Fund Program*, February 15, 2007. Obligated funds are customer funds that have been set aside for a selected project and have not been paid to the receiving entity.

Green Mountain Energy

As previously mentioned, Green Mountain Energy (GME) provides PGE with marketing and training services with respect to portfolio options, TRCs representing the delivery of the environmental attributes of electricity from less polluting sources, and product substantiation services to support the customer load for such portfolio options. According to PGE's contract with GME, GME's purchases must encourage the development of new renewable generation facilities for the benefit of PGE's customers.

As approved by the Commission, PGE has been signing annual contract renewals with GME since the 2004-06 contract expired. PGE has already signed renewal contracts for the 2007 and 2008 contract years. Additionally, PGE has decided that it wants to renew the contract with GME for another year which is a renewal through 2009. Beginning with the 2010 program year, the Company must issue an RFP to actively test the market.

As a result of changes in national standards for TRCs and a recommendation from the Portfolio Option Committee, the Commission requires all renewable portfolio options to consist of 100 percent new renewable resources as of January 1, 2007.

The following table highlights the percentage breakdowns of the cost components related to the premium billed to PGE customers participating in the Green Source program.

Table 1 – Percent Breakdown on Green Source Premium for 2004 through 2006

Green Tag Purchases	33%
Healthy Habitat and Green Source Development Fund	11%
PGE Billing and Administrative Costs	5%
GME Marketing and Administrative Costs	51%

During 2006, the rate design of the Healthy Habitat program was changed, with its participants placed on the Green Source option and a \$2.50 monthly habitat premium added. The Habitat Option was made available to all renewable program participants.

A premium of \$8.00/MWh is billed to PGE customers participating in the Green Source and Healthy Habitat Programs.⁷ The figures provided in Table 2 below show the cost components related to these programs. The development fund related to these two programs, the "Healthy Habitat and Green Source Development Fund," is separately maintained from the "Clean Wind Development Fund."

⁷ Habitat participants pay an additional \$2.50 per month for salmon habitat restoration.

Table 2 – Cost Breakdown on Green Source Monthly Premium for 2004 Through 2006 for a Customer Using 1,000 Kilowatt-Hour Per Month

Premium Cost (MWh)	\$8.00
Green Tag Purchases	\$2.60
Healthy Habitat and Green Source Development Fund	\$0.90
PGE Billing and Administrative Costs	\$0.40
GME Marketing and Administrative Costs	\$4.10

The figures provided below in Table 3 show the liabilities accrued to the Green Source and Habitat programs.

Table 3 – Accrued Liabilities Attributed From Green Mountain for 2004 through 2006

	2004	2005	2006
Green Tag Purchases	\$546,369	\$680,266	\$884,014
Healthy Habitat and Green Source Development Fund	\$188,259	\$235,697	\$267,851
PGE Billing and Administrative Costs	\$83,957	\$104,681	\$156,370
GME Marketing and Administrative Costs	\$860,564	\$1,072,985	\$1,375,324

Payments made to GME for GME Marketing and Administrative Costs and Green Tag Purchases were provided to Staff. Total disbursements in 2004, 2005, and 2006 for GME Marketing and Administrative Costs were \$829,174, \$1,116,666, and \$1,348,512, respectively. Total disbursements in 2004, 2005, and 2006 for Green Tag Purchases were \$273,276, \$761,357, and \$564,482, respectively. It is important to note that accrued liabilities and actual payments will differ as a result of timing differences between receivables and payables. PGE Billing and Administrative Costs are not recorded to Power Costs nor accrued as a liability.

According to the agreement, PGE designates a target price (\$2.60/MWh in 2004, 2005, and 2006) for a supply of green tags needed to meet customer sales. After consulting with PGE regarding tag quality, generation location, and source, GME executes a supply agreement for green tags.

According to PGE, the contract between PGE and GME is structured to keep costs of TRCs as low as possible in order to benefit PGE customers. A section of the contract requires PGE to pay GME the price differential between the target price (\$2.60/MWh) and the actual annual cost of TRCs **even** if the actual annual cost is **lower** than the target price. As an example, if the actual cost of TRCs were \$2.35/MWh and annual load was 200,000 MWh, than PGE would pay GME a true-up cost for TRCs of \$50,000. PGE has not yet been required to pay the difference over the target price of \$2.60/MWh because GME has never paid more than \$2.60 per green tag during the years 2004, 2005, and 2006.

GME invoices PGE for the difference between the actual cost of TRCs sold to PGE and the target price. In both 2005 and 2006, the actual average costs of TRCs sold to PGE was less than the targeted price resulting in price differential payments to GME for the two years. Audit Staff recommends that PGE and Program Staff review the PGE payment structure (formula) to GME for the TRCs as well as the historical trends on the actual target price of \$2.60/MWh set by PGE and GME to ensure the structure is equitable among the parties.

The figures provided below in Table 4 show the liabilities accrued for the Clean Wind program by category.

Table 4 – Clean Wind Program Accrued Liabilities

	2004	2005	2006
Green Tag Purchases	\$106,225	\$123,867	\$140,245
Wind Development and Reserve Fund	\$265,562	\$309,667	\$350,612

Payments made to GME for Green Tag Purchases for the Clean Wind program were provided to Staff. Total disbursements in 2004, 2005, and 2006, for Green Tag Purchases were \$117,429, \$189,286, and \$153,033, respectively. It is important to note that accrued liabilities and actual payments will differ as a result of timing differences between receivables and payables.

Healthy Habitat and Green Source Development Fund

PGE established the Healthy Habitat and Green Source Development Fund primarily as a hedge to address volatility in the cost of green tags. In 2004, 2005, and 2006, the amount deposited in the fund was \$0.90 multiplied by the aggregate number of MWh of customer load for the Blended Renewable Product (Green Source) and the Habitat Mitigation Product (Habitat).

To date, there have been no disbursements from the Healthy Habitat and Green Source Development Fund for development of new renewable resources. The balance in the Healthy Habitat and Green Source Development Fund was approximately \$726,000 as of April 17, 2007. The Portfolio Options Committee periodically examines the surplus funds in the Healthy Habitat and Green Source Development Fund and provides recommendations for disbursements for renewable resource development projects.

The Company does not apply a carrying charge to the balance in the Healthy Habitat and Green Source Development Fund. According to the Company, the contract with GME does not call for interest to be applied. However, since PGE maintains the Healthy Habitat and Green Source Development Fund and monies collected for this fund comes from PGE customers, Audit Staff recommends that PGE apply its authorized rate of return to the balance of the fund.

PGE Internal Controls

According to information provided by PGE, the liability to purchase green tags for all of PGE's renewable resource programs is maintained in an accounts payable account, J14881. Within this account, each program is tracked and reconciled separately. The Clean Wind Development Fund is maintained in a separate accounts payable account J14882, and the Healthy Habitat and Green Source Development Fund is maintained in ledger in another accounts payable account, J14884.

Disbursements for each program are identified by a unique activity code, which is included in the accounting string used to record each payment. This enables appropriate postings to record disbursements as reductions to the liability associated with each program. The liability balances for each program are reported monthly to program management for review. The related accounting strings are shown below.

Clean Wind Option:

Development Fund	181-J14882-99-999-00000-CWDEV
Green Tags	181-J14881-99-999-00000-CWGRN

Habitat and Green Source Options:

Nature Conservancy	181-J14881-99-999-00000-HHTNC
Green Mountain Energy	181-J14881-99-999-00000-HGGME
PGE's Purchases (TRCs)	181-J14881-99-999-00000-HGPGE

To separately identify the funds associated with the \$0.90/MWh component, PGE reclassifies amounts previously included in J14881 that represent those component funds to J14884. In July 2006, PGE reclassified for January 2004 through December 2005 activity. In September 2006, PGE reclassified for January through August 2006.

Staff reviewed transaction summaries and selected journal record entries concerning renewable transactions requesting specific information on various transactions. Staff did not note any issues concerning disbursements; however, while responding to a Staff data request, PGE discovered that the adjustments related to the Green Tag Liability Account for the second half of 2005 and for the entirety of 2006 were not recorded. Thus, a correcting journal entry was recorded in April 2007 to debit (reduce) accounts payable and credit (increase) revenues in the amount of \$398,624. This accounting entry does not affect the balance of the Clean Wind Development Fund.

GME provides PGE with TRC attestations to document all customer purchases for these programs. PGE provides these attestations to the Commission by April 1 each year. Because GME is paid on a performance basis with its revenues solely derived from customer enrollments, PGE monitors weekly and monthly enrollment reports to monitor GME activities. PGE also monitors GME enrollment channel budgets and staffing levels to ensure that this contractor is providing a high level of service.

Additionally, PGE and GME work under a legally enforceable contract with spending and reporting requirements. PGE and GME conduct bi-weekly program operation meetings to ensure productive operations and monthly marketing meetings to discuss program approaches and adjustments. The two companies work together periodically to plan longer term program marketing. The two companies also maintain routine contact via email and telephone. The contract and these frequent meetings, coupled with PGE's monitoring weekly enrollment reports and monthly portfolio option enrollment reports, allow GME to demonstrate its level of effort and expenditures in strengthening the renewable portfolio programs.

PGE has not performed an internal audit of the portfolio option funds regarding disbursements to Green Mountain Energy and The Nature Conservancy. However, PGE's 2007 Internal Audit Plan includes a scheduled audit project for "Renewables - residential program."

Comparison of Sources for PGE Renewable Choices

The following table highlights the sources of energy provided to PGE's residential and small business customers in 2005, as well as TRC sources for green power participants.⁸ For Clean Wind (Fixed Renewable), the graph shows sources for a typical customer using 1,000 kWh per month, and purchasing one block (200 kWh).

Table 5 – Energy Sources for Basic Service and Renewable Programs

	Option			
	Energy Sources for Basic Service	TRC Sources for Fixed Renewable (Clean Wind)	TRC Sources for Habitat	TRC Sources for Renewable Usage (Green Source)
Source:				
Hydro	41.5%	33.2%	25.0% ⁹	25.0% ¹⁰
Nuclear	1.1%	0.9%	0.0%	0.0%
Other	0.6%	0.5%	0.0%	0.0%
Geothermal	0.0%	0.0%	25.0%	25.0%
Coal	42.0%	33.6%	0.0%	0.0%
Waste	0.5%	0.4%	0.0%	0.0%
Wind	0.4%	20.3%	50.0%	50.0%
Natural Gas	13.9%	11.1%	0.0%	0.0%
Total	100.0%	100.0%	100.0%	100.0%

PGE Customer Enrollment in Renewable Choices

The following table highlights the U.S. Department of Energy's National Renewable Energy Laboratory national ranking of PGE's green power options.

⁸ PGE has yet to finalize the 2006 numbers at the time of this report.

⁹ Certified low-impact hydro.

Table 6 – NREL Data on PGE's Renewable Programs

Year	Number of Participants	Ranking	MWh Sold	Ranking
2002	19,623	4	57,989	5
2003	26,893	3	188,646	2
2004	33,481	3	262,143	2
2005	40,570	3	339,577	2
2006	50,284	3	432,826	2

The following table highlights customer churn¹⁰ information for 2005 and 2006.

Table 7 – Customer Churn Information (All Options)

Activity/Category	2005	2006
Year Start Participation	33,491	40,570
Adds - Moved and continued participation**	2,480	2,660
Drops - Discontinued participation, with or without a move	4,185	4,991
Added Participants	11,264	14,705
Year End Participation	40,570	50,284

**Adds do not affect participation count.

Additional Audit Comments

Staff found no mixing of funds between the fixed renewable and 100% usage options. Funds for Tradable Renewable Credits to satisfy the Green Source and Habitat programs are aggregated and disbursed to obtain volume discounts.

Audit Staff greatly appreciates the assistance received from Resource and Market Analysis Staff and PGE during the Audit. PGE does not disagree with Staff's recommendations.

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¹⁰ "Churn" indicates changes in program enrollment.