

# Report to Legislative Assembly on Public Purpose Expenditures 2005 - 2006

## Final Report

**ECONorthwest**

ECONOMICS • FINANCE • PLANNING

888 SW Fifth Avenue, Suite 1460  
Portland, Oregon 97204  
503-222-6060

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## **Acknowledgements**

This report was prepared by ECONorthwest's Portland office in response to ORS 757.617(1)(a) that requires documentation of Public Purpose Charge (PPC) receipts and expenditures as part of SB 1149. ECONorthwest was selected to conduct this review under a competitive bid administered jointly by the Oregon Department of Energy and the Oregon Public Utility Commission. Dr. Stephen Grover was the project manager for the analysis and questions regarding the report should be directed to him by e-mail at [grover@portland.econnw.com](mailto:grover@portland.econnw.com) or by phone at (503) 222-6060. John Boroski and Jessica Brown of ECONorthwest also assisted with this analysis and report.

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## EXECUTIVE SUMMARY

### INTRODUCTION

In July 1999, Senate Bill 1149 (SB 1149) was enacted to introduce competition into Oregon's electricity markets within the Portland General Electric (PGE) and PacifiCorp service territories<sup>1</sup>. As part of SB 1149, these utilities were required to reserve 3 percent of their retail electricity sales beginning in March 2002. This public purpose charge is used to fund energy conservation and renewable energy programs and to help provide weatherization and other energy assistance to low-income households and public schools in Oregon.

Oregon has a 30-year history of using ratepayer funding for conservation and renewable programs prior to SB 1149. In the prior system, ratepayer funds were used directly by utilities to provide incentives for conservation and renewable technologies. With the current system under SB 1149, programs are still funded by ratepayers (through the public purpose charge) but responsibility for running these programs has been removed from the utilities and given to several different agencies:

- **Energy Trust of Oregon, Inc.** The non-profit Energy Trust began administering funds in March 2002 and seeks to develop and implement programs that promote energy conservation and development of renewable energy resources within Oregon. The Energy Trust receives 73.8 percent of the available public purpose charge funds; 56.7 percent is dedicated to conservation programs and 17.1 percent is dedicated for renewable energy projects.
- **Education Service Districts.** Oregon's Education Service Districts receive 10 percent of public purpose charge funds to improve energy efficiency and purchase renewable energy in individual schools.
- **Oregon Housing and Community Services.** Oregon Housing and Community Services (OHCS) receives and administers public purpose charge funds for low-income housing programs. 4.5 percent of the public purpose charge funds are dedicated to low-income housing development projects; these projects involve construction of new housing or rehabilitation of existing housing for low-income families through the OHCS Housing Trust Fund. OHCS operates two weatherization programs, and an additional 11.7 percent of total purpose charge funds collected is allocated for low-income weatherization. One program provides home weatherization (for single- and multi-family, owner occupied, and rental housing) and the other provides for weatherization of affordable multi-family rental housing through the OHCS Housing Division.

In addition to projects conducted by these agencies, large commercial and industrial customers can implement their own energy conservation or renewable energy projects. These "self-direct" customers can then deduct the cost of projects from the conservation and renewable resource development portion of their public purpose charge obligation to utilities.

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<sup>1</sup> SB 1149 is codified in ORS 757.600, et. seq. ORS 757.612 specifically addresses the public purpose charge.

In April 2006, ECONorthwest was hired by the Oregon Department of Energy and the Oregon Public Utility Commission to prepare a report to the Oregon Legislature documenting PPC receipts and expenditures in compliance with ORS 757.617(1)(a). Specifically, ECONorthwest

- Documented PPC disbursements to each agency by PGE and PacifiCorp;
- Demonstrated how each agency utilized funds;
- Summarized important project accomplishments; and
- Documented administrative costs using a common cost definition across agencies.

This report does not attempt to evaluate how well the various PPC programs are being implemented, nor have we attempted to independently verify the energy savings accomplishments reported by the PPC fund administrators. These issues are usually addressed through formal program evaluations such as those currently being performed by the Energy Trust of Oregon for its programs.

## **RECEIPT AND EXPENDITURE SUMMARY**

The following table shows PPC fund disbursements to the various administrators and programs for the January 1, 2005 – December 31, 2006 period. The far right column of the table shows the level of expenditure for these funds over the same period, and shows that expenditures were generally equal to disbursements for most programs. As shown at the bottom of the table, PPC expenditures totaled \$126,070,476 across all fund administrators. Administrative costs for agencies administering the PPC funds totaled \$7,649,194, or 6.1 percent of all expenditures during this period.

**PPC Disbursements and Expenditures (1/2005 – 12/2006)**

Fund Administrator / Program	Disbursement Source			Expenditure
	PGE	PacifiCorp	Total	Total
<b>Energy Trust of Oregon</b>				
Conservation	\$43,786,197	\$28,145,880	\$71,932,077	\$75,417,916
Renewable Energy	\$13,183,206	\$8,508,496	\$21,691,702	\$4,560,922
Administrative Expenses				\$6,243,451
<b>Education Service Districts*</b>	\$8,274,173	\$4,979,132	\$13,253,305	\$13,748,062
ODOE Program Expenses				\$404,870
Administrative Expenses				\$546,160
<b>Oregon Housing and Community Services</b>				
Low-Income Weatherization**	\$9,635,686	\$5,829,914	\$15,465,600	\$12,804,960
Low-Income Housing	\$3,882,178	\$2,242,376	\$6,124,554	\$6,438,469
Administrative Expenses				\$840,882
Evaluation, Training, Technical Assistance				\$641,447
Energy Education				\$151,075
<b>Self-Direct Customers***</b>				
Conservation	\$2,660,087	\$379,130	\$3,039,216	\$3,039,216
Renewable Energy	\$916,417	\$245,767	\$1,162,183	\$1,162,183
ODOE Program Expenses				\$52,161
Administrative Expenses				\$18,701
<b>Totals</b>	<b>\$82,337,943</b>	<b>\$50,330,694</b>	<b>\$132,668,637</b>	<b>\$126,070,476</b>
<b>Administrative Costs Only</b>				<b>\$7,649,194</b>

\* ESD receipts currently exceed disbursements reported by PGE by \$90.

\*\*Low-Income Weatherization includes the ECHO program and the Low-Income Weatherization Program (for multi-family rental housing.)

\*\*\*The amounts listed for Self-Direct represent public purpose charges retained by the participating sites in lieu of making payments to the utilities, which are then distributed among the other agencies (e.g., Energy Trust)

The following table summarizes the expenditures and results for PPC expenditures from January 2005 through December 2006. The agencies spent a combined total of \$126,070,476 on programs and projects completed during this period. Annual energy savings and renewable resource generation achieved from projects completed during this time reached 790,583,800 kWh (90 aMW), which is enough to power more than 54,000 average-sized homes each year.<sup>2</sup>

<sup>2</sup> Calculated using the Northwest Power Planning Council's estimate that an average megawatt is enough to power 600 homes each year (assuming electric heat).

When all fuel types are included in addition to electricity, PPC expenditures resulted in annual savings of 2,739,744 million Btu.

**Summary of PPC Expenditures and Results (1/2005 – 12/2006)**

Agency / Program	Expenditures	Results		
		kWh Saved or Generated	aMW	MMBtu
<b>Energy Trust – Conservation</b>	\$80,837,638	530,708,442	60.58	1,811,308
<b>Energy Trust – Renewables*</b>	5,384,651	21,557,000	2.46	73,574
<b>Education Service Districts**</b>	\$14,699,092	9,475,250	1.08	73,821
<b>OHCS Low-Income***</b>	\$20,876,833	18,402,856	2.10	62,809
<b>Self-Direct Customers****</b>	\$4,272,262	210,440,252	24.02	718,233
<b>Total Expenditures</b>	<b>\$126,070,476</b>	<b>790,583,800</b>	<b>90.25</b>	<b>2,739,744</b>

\* Energy saved includes savings from reduced transmission and distribution losses. Renewable energy savings is from currently operational projects.

\*\* MMBtu includes natural gas, propane and oil savings, in addition to electricity savings.

\*\*\*Expenditures for the OHCS Low-Income program include expenditures from the Housing Trust Fund, which does not track energy savings for its projects.

\*\*\*\*Expenditures listed for Self-Direct represent public purpose charges retained by the participating sites in lieu of making payments to the utilities, which are then distributed among the other agencies (e.g., Energy Trust)

# 1. PUBLIC PURPOSE CHARGE (PPC) OVERVIEW

## INTRODUCTION

In July 1999, Senate Bill 1149 (SB 1149) was enacted to introduce competition into Oregon's electricity markets within the Portland General Electric (PGE) and PacifiCorp service territories<sup>3</sup>. As part of SB 1149, these utilities were required to reserve 3 percent of their retail electricity sales beginning in March 2002. This public purpose charge is used to fund energy conservation and renewable energy programs and to help provide weatherization and other energy assistance to low-income households and public schools in Oregon.

In April 2006, ECONorthwest was hired by the Oregon Department of Energy and the Oregon Public Utility Commission to prepare a report to the Oregon Legislature documenting PPC receipts and expenditures in compliance with ORS 757.617(1)(a). Specifically, ECONorthwest

- Documented PPC disbursements to each agency by PGE and PacifiCorp;
- Demonstrated how each agency utilized funds;
- Summarized important project accomplishments; and
- Documented administration costs using a common cost definition across PPC administrators.

The remainder of this section provides an overview of the total PPC funds collected and disbursed from January 2005 through December 2006. Additional detail on how each organization utilized funds is provided in subsequent sections.

## PPC FUND DISTRIBUTION

The PPC funds are collected and distributed across several organizations for administration of energy conservation and renewable energy programs:

- **Energy Trust of Oregon, Inc.** The non-profit Energy Trust began administering funds in March 2002; the Energy Trust seeks to develop and implement programs that promote energy conservation and development of renewable energy resources within the State. The Energy Trust receives 73 percent of the available PPC funds (56 percent dedicated to conservation programs and 17 percent for renewable energy projects).
- **Education Service Districts.** Oregon's Education Service Districts receive 10 percent of PPC funds to improve energy efficiency in individual schools.
- **Oregon Housing and Community Services.** Oregon Housing and Community Services (OHCS) receives and administers PPC funds for low-income housing programs. 4.5 percent of the PPC funds are dedicated to low-income housing development projects; the

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<sup>3</sup> SB 1149 is codified in ORS 757.600, et. seq. ORS 757.612 specifically addresses the public purpose charge.

projects involve construction of new housing or rehabilitation of existing housing for low-income families through the OHCS Housing Trust Fund. OHCS operates two weatherization programs, and an additional 11.7 percent of the total PPC funds collected are allocated for low-income weatherization. One program provides home weatherization (for single- and multi-family, owner occupied, and rental housing) and the other provides for weatherization of affordable multi-family rental housing through the OHCS Housing Division.

In addition to projects conducted by these agencies, large commercial and industrial customers can implement their own energy conservation or renewable energy projects. These “self-direct” customers can then deduct the cost of projects from the conservation and renewable resource development portion of their PPC obligation to utilities.

Figure 1 shows how total PPC funds are allocated across administrators based on the utilities’ PPC fund disbursement data for January 2005 through December 2006 (see Table 2).

**Figure 1: PPC Fund Allocation by Administrator and Program (1/2005-12/2006)<sup>4</sup>**

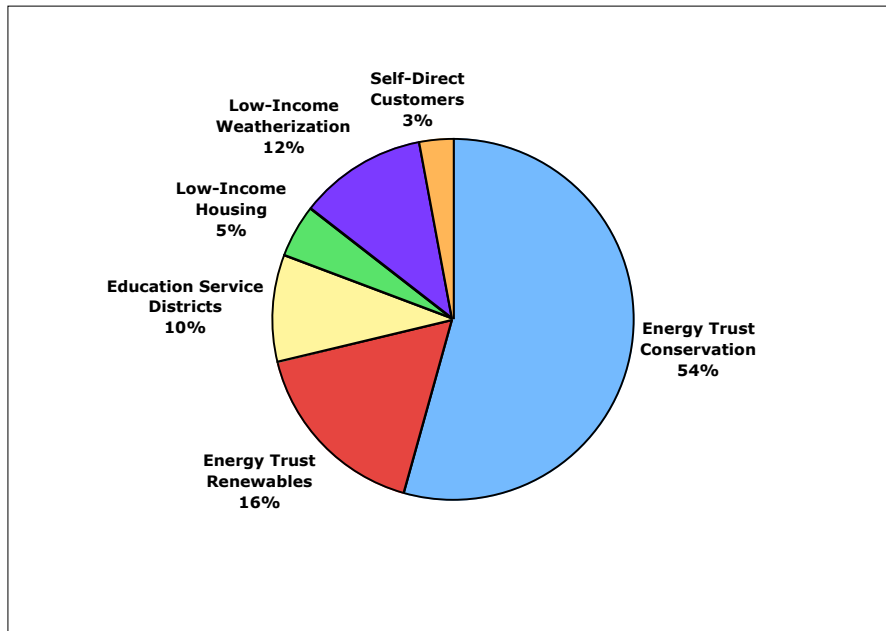


Figure 2 shows the total PPC fund collections for the January 2005 – December 2006 period divided among residential and non-residential ratepayers for each utility<sup>5</sup>. For both utilities, the majority of public purpose funds come from the non-residential sector.

<sup>4</sup> Note that the graph includes the self-direct expenditures, and consequently the allocation percentages do not coincide with the PPC disbursement information discussed previously, which are based on total PPC funds *collected* by the utilities.

<sup>5</sup> The sector share was calculated by each utility based on revenues received from January 2005 thru December 2006. Because of the seasonal nature of energy consumption, this distribution will vary depending on the time period.

**Figure 2: Sector Contribution of PPC Funds by Utility**

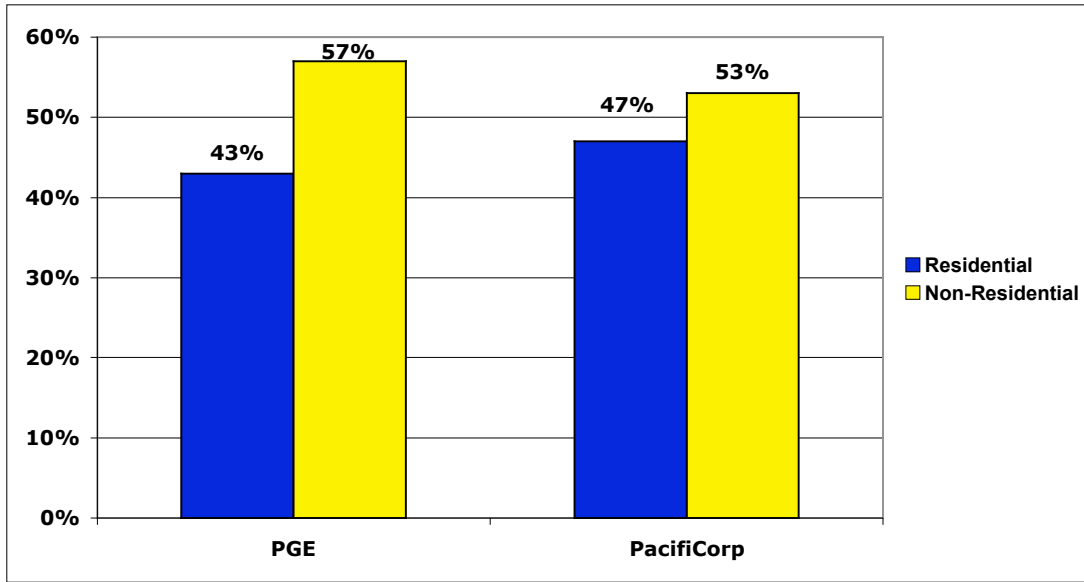
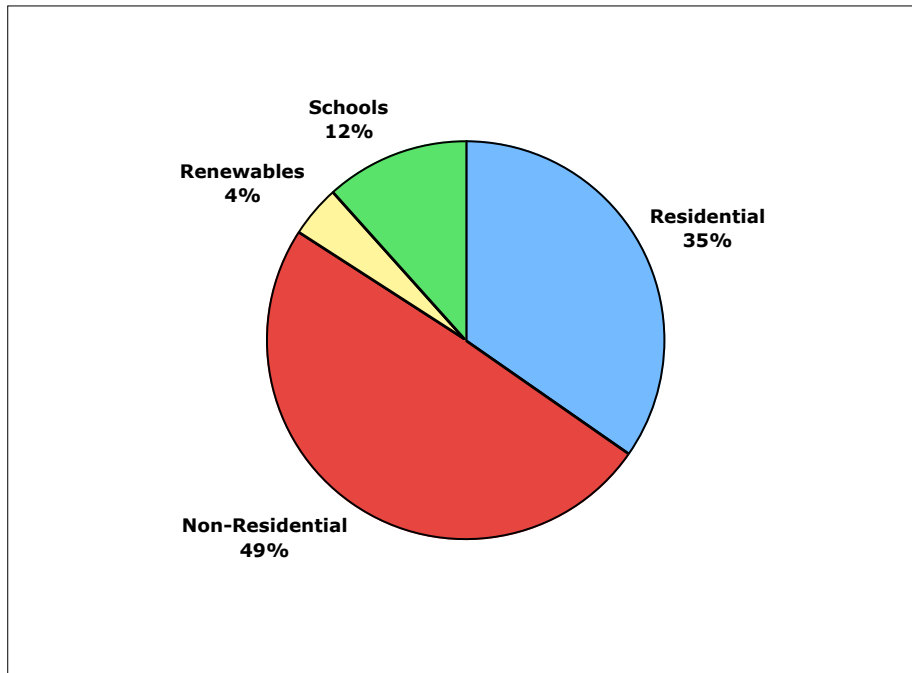


Figure 3 shows how PPC fund expenditures by the various agencies and programs are distributed among sectors. The residential sector (covered by the OHCS and Energy Trust residential conservation programs) received 35 percent of expenditures from January 2005 to December 2006. Over the same timeframe, schools received 12 percent of expenditures, 4 percent of expenditures were spent on renewable resource development, and 49 percent of expenditures were spent on programs for non-residential customers.

**Figure 3: Distribution of PPC Expenditures**



## RECEIPT AND EXPENDITURE SUMMARY

This report details Public Purpose Charge (PPC) expenditures from January 1, 2005 through December 31, 2006. Table 1 shows the total funds collected during this period from both PGE and PacifiCorp. Over this 24-month period, \$82,337,943 in PPC funds was disbursed by PGE and \$50,330,694 was disbursed by PacifiCorp, for a total of \$132,668,637 in PPC funds allocated for conservation and renewable energy programs across agencies. The utilities spent a combined total of \$59,715 on administrative expenses to collect and distribute PPC funds, which includes funds distributed to the Oregon PUC to help oversee this effort.

**Table 1: Total PPC Fund Disbursements (1/2005 – 12/2006)**

Source	PPC Disbursements	Administrative Expenses
PGE	\$82,337,943	\$43,897
PacifiCorp	\$50,330,694	\$15,818
<b>Total</b>	<b>\$132,668,637</b>	<b>\$59,715</b>

Table 2 provides additional detail on the disbursement across the various programs for the January 2005 – December 2006 period. The far right column of the table shows the level of expenditure for these funds over the same period, and shows that expenditures were generally equal to disbursements for most programs. As shown at the bottom of the table, PPC expenditures totaled \$126,070,476 across all fund administrators. Administrative costs for agencies administering the PPC funds totaled \$7,649,194, or 6.1 percent of all expenditures during this period.

**Table 2: PPC Disbursements and Expenditures (1/2005 – 12/2006)**

Fund Administrator / Program	Disbursement Source			Expenditure
	PGE	PacifiCorp	Total	Total
<b>Energy Trust of Oregon</b>				
Conservation	\$43,786,197	\$28,145,880	\$71,932,077	\$75,417,916
Renewable Energy	\$13,183,206	\$8,508,496	\$21,691,702	\$4,560,922
Administrative Expenses				\$6,243,451
<b>Education Service Districts*</b>	\$8,274,173	\$4,979,132	\$13,253,305	\$13,748,062
ODOE Program Expenses				\$404,870
Administrative Expenses				\$546,160
<b>Oregon Housing and Community Services</b>				
Low-Income Weatherization**	\$9,635,686	\$5,829,914	\$15,465,600	\$12,804,960
Low-Income Housing	\$3,882,178	\$2,242,376	\$6,124,554	\$6,438,469
Administrative Expenses				\$840,882
Evaluation, Training, Technical Assistance				\$641,447
Energy Education				\$151,075
<b>Self-Direct Customers***</b>				
Conservation	\$2,660,087	\$379,130	\$3,039,216	\$3,039,216
Renewable Energy	\$916,417	\$245,767	\$1,162,183	\$1,162,183
ODOE Program Expenses				\$52,161
Administrative Expenses				\$18,701
<b>Totals</b>	<b>\$82,337,943</b>	<b>\$50,330,694</b>	<b>\$132,668,637</b>	<b>\$126,070,476</b>
<b>Administrative Costs Only</b>				<b>\$7,649,194</b>

\* ESD receipts currently exceed disbursements reported by PGE by \$90.

\*\*Low-Income Weatherization includes the ECHO program and the Low-Income Weatherization Program (for multi-family rental housing.)

\*\*\*The amounts listed for Self-Direct represent public purpose charges retained by the participating sites in lieu of making payments to the utilities, which are then distributed among the other agencies (e.g., Energy Trust)

Table 3 shows the timing of PPC receipts and expenditures since 2004 for each agency. Unexpended funds from 2004 are added to receipts from the January 2005 – December 2006 period to show total funds available, and expenditures over this same period are also tabulated.

**Table 3: Cumulative PPC Receipts and Expenditures (1/2005-12/2006)**

<b>Fund Administrator / Program</b>	<b>2004 Carry Forward*</b>	<b>1/2005-12/2006 Receipts</b>	<b>1/2005-12/2006 Expenditures</b>
<b>Energy Trust of Oregon</b>			
Conservation	\$11,810,858	\$71,932,077	\$80,837,638
Renewable Energy	\$18,399,578	\$21,691,702	\$5,384,651
<b>Education Service Districts</b>	\$5,946,973	\$13,253,305	\$14,699,092
<b>Oregon Housing and Community Services**</b>	\$12,940,741	\$21,590,154	\$20,876,833
<b>Self-Direct Customers***</b>	\$0	\$4,201,400	\$4,272,262
<b>Totals</b>	<b>\$49,098,150</b>	<b>\$132,668,638</b>	<b>\$126,070,476</b>

\*2004 carryover amounts calculated by ECONorthwest using data from the prior PPC fund report *Report to Legislative Assembly on Public Purpose Expenditures for the Period January 1, 2003 – December 31, 2004* (March 3, 2005).

\*\*Expenditures for the OHCS Low-Income program include expenditures from the Housing Trust Fund.

\*\*\* The amounts listed for Self-Direct represent public purpose charges retained by the participating sites in lieu of making payments to the utilities, which are then distributed among the other agencies (e.g., Energy Trust)

The remaining sections in this report describe how each organization used its allocated funds. For comparison's sake, administrative expenses must be defined consistently across agencies. In this report, we define administrative expenses as

1. Costs that cannot be otherwise associated with a certain program but which support an agency's general operations. These costs may include board or executive director activities, general business management, accounting, general reporting, and oversight;
2. General outreach and communication; and
3. The following direct program support costs:
  - a. Supplies
  - b. Postage and shipping
  - c. Telephone
  - d. Occupancy expenses
  - e. Printing and publications
  - f. Insurance
  - g. Equipment
  - h. Travel
  - i. Meetings, training, and conferences
  - j. Interest expense and bank fees
  - k. Depreciation and amortization
  - l. Dues, licenses, and fees
  - m. Other misc. expenses

The administrative expenses provided for each agency all conform with this definition.

## 2. ENERGY TRUST OF OREGON, INC.

### OVERVIEW

The Oregon PUC designated the Energy Trust of Oregon, Inc. to administer the conservation and renewable resource components of the PPC. The Trust sponsors a suite of programs that target new and existing residential, commercial, and industrial electricity customers in the PGE and PacifiCorp service areas. Through these programs, Energy Trust provides technical and information assistance and financial incentives to install efficiency measures and renewable energy resources. A portion of the funds from Energy Trust is also allocated to the Northwest Energy Efficiency Alliance (NEEA) to support its ongoing energy efficiency market transformation programs.<sup>6</sup>

Table 4 provides a summary of Energy Trust PPC revenues and expenditures from January 1, 2005 through December 31, 2006. Funds received by Energy Trust during this period totaled \$93,623,779, and expenditures totaled \$86,222,289. Administrative expenses totaled \$6,243,451 and comprised 7.2 percent of total spending by Energy Trust on electric conservation and renewable programs and 6.7 percent of total PPC receipts during this period.<sup>7</sup>

**Table 4: Energy Trust Receipt and Expenditure Summary (1/2005 – 12/2006)**

<b>Transaction</b>	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b>Total Fund Receipts</b>	<b>\$56,969,403</b>	<b>\$36,654,376</b>	<b>\$93,623,779</b>
<b>Expenditures</b>			
Energy Conservation	\$43,915,430	\$31,502,485	\$75,417,916
Renewable Energy	\$2,154,482	\$2,406,440	\$4,560,922
Administrative Expenses	\$3,596,474	\$2,646,977	\$6,243,451
<b>Total Expenditures</b>	<b>\$49,666,386</b>	<b>\$36,555,903</b>	<b>\$86,222,289</b>

Specific detail on Energy Trust conservation and renewable energy program activities is provided below.

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<sup>6</sup> The Energy Trust also administers residential and commercial conservation programs for Northwest Natural Gas Company and Cascade Natural Gas Corporation under the terms of a stipulation with the PUC. Avista Utilities also began contracting with the Energy Trust in 2006 to deliver three programs in its service territory.

<sup>7</sup> Administrative expenses used here and in subsequent tables are defined using the common administrative expense definition discussed in the introduction of this report. Administrative costs allocated to Northwest Natural Gas, Cascade Natural Gas and Avista Utilities are not included.

## ENERGY CONSERVATION

### Receipts and Expenditures

Table 5 shows Energy Trust fund receipts and expenditures for its conservation programs. During the January 2005 – December 2006 period, \$71,932,077 in PPC funds was distributed to Energy Trust for spending on these programs. Conservation program expenditures totaled \$80,837,638 during this same period. Administrative costs that could be directly assigned to Energy Trust conservation programs totaled \$5,419,722, or 6.7 percent of total conservation program spending and 7.5 percent of total PPC receipts for conservation programs.

**Table 5: Energy Trust Conservation Receipts and Expenditures (1/2005 – 12/2006)**

<b>Transaction</b>	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b>Fund Receipts</b>	<b>\$43,786,197</b>	<b>\$28,145,880</b>	<b>\$71,932,077</b>
<b>Expenditures</b>			
Program Expenditures	\$43,915,430	\$31,502,485	\$75,417,916
Administrative Expenses	\$3,131,859	\$2,287,864	\$5,419,722
<b>Total Expenditures</b>	<b>\$47,047,289</b>	<b>\$33,790,349</b>	<b>\$80,837,638</b>

### Results

Energy Trust conservation activities consisted of the design and delivery of conservation programs targeted to different market sectors with a wide range of energy saving measures. Table 6 shows the accomplishments of the individual programs sponsored by the Energy Trust. During the period covered by this report, 530,708,442 kWh in energy savings were achieved across all market sectors. The Industrial sector accounted for almost half of these savings with 243,438,326 kWh saved. Residential sector savings were 172,293,465 kWh (32 percent of total Energy Trust Savings), and Commercial sector savings were 114,976,651 (22 percent).

Within the Residential sector, market transformation programs funded through NEEA accounted for the largest share of savings, with 59 percent of energy savings within that sector. In the Commercial sector, the Building Efficiency Program was the largest contributor and accounted for 62 percent of the energy savings achieved in this sector.

**Table 6: Energy Trust Conservation Programs Energy Savings By Service Territory (1/2005-12/2006)\***

<b>Program Name</b>	<b>PGE Savings (kWh)</b>	<b>PacifiCorp Savings (kWh)</b>	<b>Total Savings (kWh)</b>	<b>Average Life of Savings (years)</b>
<b>Residential</b>				
Home Energy Savings (includes State Home Oil Weatherization and solar hot water)	20,635,558	9,289,826	29,925,385	19
Efficient New Homes (includes multi-family and manufactured)	3,406,012	1,520,583	4,926,595	32
NEEA (Market Transformation)	58,907,468	42,690,301	101,597,769	8
Efficient Home Products	22,277,376	13,566,340	35,843,716	10
<b>Total Residential</b>	<b>105,226,415</b>	<b>67,067,050</b>	<b>172,293,465</b>	<b>14</b>
<b>Commercial</b>				
Building Efficiency (includes solar hot water)	50,720,804	20,935,002	71,655,805	13
New Building Efficiency	15,484,629	6,372,175	21,856,804	18
Building Tune-Ups	1,484,055	666,820	2,150,875	3
LED Stoplights	1,119,795	1,445,301	2,565,095	7
NEEA (Market Transformation)	9,902,405	6,845,667	16,748,072	15
<b>Total Commercial</b>	<b>78,711,686</b>	<b>36,264,965</b>	<b>114,976,651</b>	<b>14</b>
<b>Industrial</b>				
Production Efficiency	142,445,504	91,819,164	234,264,668	12
NEEA (Market Transformation)	5,372,018	3,801,641	9,173,658	10
<b>Total Industrial</b>	<b>147,817,522</b>	<b>95,620,805</b>	<b>243,438,326</b>	<b>12</b>
<b>Total All Programs</b>	<b>331,755,623</b>	<b>198,952,819</b>	<b>530,708,442</b>	<b>13</b>

\* Conservation program savings do not include savings from reduced transmission and distribution losses, and therefore do not match savings reported in Energy Trust's Annual Reports.

Table 7 provides additional detail regarding the types of efficiency improvements that are being implemented for the various conservation programs. In the Residential sector over 35,000 efficient clothes washers were installed, and in the Commercial sector, about 350 highly efficient new commercial buildings have been developed.

**Table 7: Energy Trust Example Efficiency Improvements (1/2005 – 12/2006)**

<b>Improvement Type</b>	<b>Number of Measures</b>	<b>Average Life of Savings (years)</b>
<b>Residential</b>		
Efficient clothes washers	35,755	14
Solar water heating systems	133	19
Efficient New Single Family Homes	1,871	32
Single Family Home Retrofits (duct sealing, insulation, high efficiency heating and efficient windows)*	6,019	23
<b>Commercial</b>		
Solar water heating systems	4	20
Highly efficient new commercial buildings	356	17
<b>Industrial</b>		
Efficient manufacturing processes, water and wastewater treatment, and agriculture	421	11

\* The number of single family home retrofits decreased compared to the results reported in the interim December 2006 report. This is because Energy Trust reclassified some measures as “gas savings only” based on improved market research and corrected reporting software. This report covers electric savings only because only the electric efficiency programs are mandated by the legislature.

Table 8 shows Energy Trust’s cost for each conservation program and the levelized energy costs that have been achieved. The most Energy Trust funds were spent on the Industrial Production Efficiency Program (\$34.4 million) followed by the Commercial Building Efficiency Program (\$12.5 million) and Residential Home Energy Savings Program (\$11.5 million). The lowest overall levelized energy costs were attained in the Residential sector, with an average cost of 1.1 cents per kWh across the residential programs. The greatest range of energy costs were realized in the Commercial sector, which ranged from 0.2 to 8.5 cents per kWh across programs.

**Table 8: Energy Trust Conservation Costs and Levelized Energy Costs (1/2005 – 12/2006)**

<b>Program Name</b>	<b>ETO Cost</b>	<b>Levelized Cost (cents/kWh)*</b>
<b>Residential</b>		
Home Energy Savings	\$11,548,551	2.4
Efficient New Homes	\$3,567,570	3.2
NEEA (Market Transformation)	\$2,229,875	0.3
Efficient Home Products	\$5,381,026	1.6
<b>Total Residential</b>	<b>\$22,727,022</b>	<b>1.1 (avg.)</b>
<b>Commercial</b>		
Building Efficiency	\$12,494,777	1.5
New Building Efficiency	\$5,874,258	1.8
Building Tune-Ups	\$584,230	8.5
LED Stoplights	\$225,192	1.3
Utility Transition**	\$13,578	N/A
NEEA (Market Transformation)	\$2,888,412	0.2
<b>Total Commercial</b>	<b>\$22,080,447</b>	<b>1.4 (avg.)</b>
<b>Industrial</b>		
Production Efficiency	\$34,379,596	1.4
Utility Transition**	(\$14,941)	N/A
CHP***	\$17,770	
NEEA (Market Transformation)****	\$1,647,742	2.0
<b>Total Industrial</b>	<b>\$36,030,167</b>	<b>1.4 (avg.)</b>

\* Levelized costs were calculated by the Energy Trust and include savings for reduced transmission and distribution losses.

\*\* Close-out work on prior projects.

\*\*\* Preparatory work for 2006 program. There are currently no participants.

\*\*\*\* Start-up, not expected to be cost effective initially.

Table 9 shows how the electric incentives paid by Energy Trust were distributed across the geographic regions of Oregon. About 60 percent of all incentives (\$31.6 million) were paid to customers in the Portland area, and 30 percent was divided between the Willamette Valley and southern Oregon.

**Table 9: Energy Trust Electric Incentive Payments by Sector and Region,  
Thousands of Dollars (1/2005 – 12/2006)**

Sector	Central/East	NW/Coast	Portland Area	Southern	Willamette Valley	Total
Residential	\$514	\$173	\$9,309	\$870	\$1,465	\$12,332
Commercial	\$1,179	\$704	\$15,495	\$5,297	\$4,517	\$27,192
Industrial	\$462	\$222	\$6,803	\$819	\$2,215	\$10,521
<b>Total</b>	<b>\$2,155</b>	<b>\$1,100</b>	<b>\$31,607</b>	<b>\$6,986</b>	<b>\$8,198</b>	<b>\$50,045</b>

## MARKET TRANSFORMATION

### Actions and Processes

NEEA is funded by the Energy Trust on behalf of PGE and PacifiCorp’s ratepayers, and by other electric utilities in Oregon, Washington, Idaho, and Montana. NEEA helps promote electric efficiency through market transformation, i.e., change in sales, selection, design, installation, operation, and maintenance practices for homes, equipment, buildings and industrial facilities. NEEA’s programs are closely integrated with those of the Energy Trust but are more focused on long-term market change. Among its initiatives in 2005 were programs for efficient new homes, compact fluorescent lamps, washing machines, personal computer power supplies, grocery stores, hospitals, food processing facilities, and pulp and paper facilities.

Table 10 shows the energy savings accomplishments of the programs delivered by NEEA. During the period covered by this report, over 125,000,000 kWh in energy savings were achieved across the three market sectors, with the Residential sector accounting for 80 percent of the savings.

**Table 10: Market Transformation Energy Savings By Program and Service Territory (1/2005-12/2006)**

Program Name	PGE Savings (kWh)	PacifiCorp Savings (kWh)	Total Savings (kWh)	Average Life of Savings (years)
NEEA Residential	58,907,468	42,690,301	101,597,769	8
NEEA Commercial	9,902,405	6,845,667	16,748,072	15
NEEA Industrial	5,372,018	3,801,641	9,173,658	10
<b>Total</b>	<b>74,181,891</b>	<b>53,337,609</b>	<b>127,519,499</b>	<b>10</b>

### Participating Firms and Organizations

Through NEEA, the Energy Trust’s efforts are coordinated with those of all the electric utilities of the Northwest (for activities beyond the PGE and PacifiCorp Oregon service territories) and

the state energy offices and public utility commissions of Oregon, Montana, Idaho and Washington. NEEA also helps coordinate some program efforts with the Federal Government, for example, by negotiating with the US Environmental Protection Agency to create the ENERGY STAR Northwest new home efficiency program. Through the Consortium for Energy Efficiency, Energy Trust and NEEA also coordinate with similar programs nationally.

Table 11 shows Energy Trust’s cost for each market transformation program. Total Energy Trust costs for market transformation were \$6.7 million, with the greatest share (42 percent) spent in the Commercial sector.

**Table 11: Energy Trust Market Transformation Costs (1/2005 – 12/2006)**

<b>Program Name</b>	<b>ETO Cost</b>
NEEA Residential	\$2,229,875
NEEA Commercial	\$2,888,412
NEEA Industrial	\$1,647,742
<b>Total</b>	<b>\$6,766,029</b>

### **Technology Advancement**

In 2005 and 2006, NEEA saw particular success in the compact fluorescent bulb market. Due in part to NEEA, utility, and Energy Trust efforts over several years, regional compact fluorescent sales increased by 1.7 million bulbs in 2005.

NEEA and its partners also led the nation in per household sales of efficient clothes washers, helping to influence an upgrade to the efficiency specification for ENERGY STAR-labeled washers. Similarly, NEEA’s efforts with personal computer power supplies (as the first entity to sign onto a national program) helped influence the development of an ENERGY STAR specification for efficient PC power supplies. Due to the popularity of the ENERGY STAR label, these efficient power supplies are expected to achieve a significant global market share over the next few years.

NEEA’s primary focus in the commercial and industrial sectors is on working with businesses at the corporate level to develop investment practices that profit from efficiency. To ensure there is a technical capability to follow through on the business plans, NEEA provides technical support to these businesses and their service contractors in daylighting, passive ventilation, integrated building design, building tune-ups, retro-commissioning, efficient motors systems, compressed, air, and pumps. NEEA also demonstrated an ultra-efficient cooling system for rooftop air conditioning of commercial buildings.

## **RENEWABLE ENERGY**

### **Receipts and Expenditures**

Table 12 shows the PPC fund receipts and expenditures dedicated to Energy Trust renewable energy programs from January 1, 2005 through December 31, 2006. During this period,

\$21,691,702 in PPC funds was allocated to Energy Trust for renewable energy projects, and renewable energy program spending totaled \$5,384,651. Administrative costs related to the renewable energy program totaled \$823,729 and comprised 15.3 percent of total renewable energy program spending by Energy Trust and 3.8 percent of the PPC receipts designated for the renewable energy programs.

**Table 12: Energy Trust Receipts and Renewable Expenditures (1/2005 – 12/2006)**

<b>Transaction</b>	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b>Fund Receipts</b>	<b>\$13,183,206</b>	<b>\$8,508,496</b>	<b>\$21,691,702</b>
<b>Expenditures</b>			
Program Expenditures	\$2,154,482	\$2,406,440	\$4,560,922
Administrative Expenses	\$464,615	\$359,114	\$823,729
<b>Total Expenditures</b>	<b>\$2,619,097</b>	<b>\$2,765,554</b>	<b>\$5,384,651</b>

## Results

Table 13 lists all the active renewable energy generation projects completed or initiated by Energy Trust from January 2005 through December 2006<sup>8</sup>. The largest amount of renewable energy capacity will be achieved through two utility-scale wind farms located in Klickitat County (WA), which will serve Oregon customers. Upon completion, all of the projects listed will provide a total of 381,492 MWh per year in renewable energy, the vast majority of which will be in PacifiCorp’s service territory (96 percent). Projects that are currently operational are providing 21,557 MWh in renewable energy per year. In particular, the Solar Electric Program, which provides homeowners and businesses with financial incentives to adopt solar power applications, has completed a large number of projects (over 200 in both service territories) that are now operational.

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<sup>8</sup> Energy Trust board policy requires Energy Trust to take ownership of green tags in proportion to its funding of above-market cost. However, project-specific information regarding green tag ownership is not published to respect commitments to program participants’ confidentiality. In general, generation projects received state and federal tax credits; some received income from green tags sales; and community wind projects generally received USDA grants ranging from \$35,000-50,000. However, pursuant to Energy Trust board policy, project-specific information on non-Energy Trust investments is not published.

Table 14 shows all of the feasibility studies and other development projects that were approved for funding by Energy Trust or Oregon's renewable energy programs from January 2005 through December 2006. A total of 41 projects are active, and range from study proposals to detailed feasibility studies. Sixteen projects are located in PGE's service territory, and 18 are located in PacifiCorp's territory. (Seven projects could be located in either or both territories.) Almost half of the projects (18) are Biomass projects, with the remainder being distributed between Solar, Hydro and Community Wind and large-scale renewable projects. The total cost for all of these studies and potential projects is \$553,223.

**Table 13: Energy Trust Renewable Energy Projects Summary**

Project	# of Projects (Solar Electric)	Status	Year	County	Estimated Life Years	Generating Capacity (MW)	Annual Energy (MWh/yr)	Project Cost (\$/MWh)	Cost to Energy Trust (\$/MWh)	Percent of Above-Market Cost Paid	Utility Service Territory
Biomass #1	n/a	Operational	2005	Multnomah	20	0.40	3,556	\$329.37	\$24.55	100%	PGE
Small wind #1	n/a	Operational	2005	Multnomah	20	0.01	14	\$4,971.99	\$2,833.59	86%	PGE
Solar Electric in PAC 2005	61	Operational	2005	n/a	20	0.24	328	\$5,424.42	\$1,996.22	75%	PAC
Solar Electric in PGE 2005	36	Operational	2005	n/a	20	0.12	142	\$5,820.95	\$2,715.98	75%	PGE
Biomass #5	n/a	Operational	2006	Jackson	20			\$209.88	--	0%	PAC
Large solar #4	n/a	Operational	2006	Yamhill	20	0.05	49	\$7,746.62	\$1,800.07	68%	PGE
Small wind #2	n/a	Operational	2006	Marion	20	0.00	6	\$4,108.49	\$2,481.13	79%	PGE
Biomass #4	n/a	Operational	2006	Douglas	20	3.04	16,714	\$196.41	--	0%	PAC
Solar Electric in PAC 2006	94	Operational	2006	n/a	20	0.38	511	\$6,344.79	\$1,310.46	90%	PAC
Solar Electric in PGE 2006	48	Operational	2006	n/a	20	0.20	237	\$7,175.26	\$1,814.59	90%	PGE
Solar Electric in PGE	6	Construction	--	n/a	20	0.03	35	\$9,110.68	\$1,528.08	65%	PGE
Solar Electric in PAC	18	Construction	--	n/a	20	0.06	108	\$6,604.11	\$1,219.47	65%	PAC
Biomass #2	n/a	Construction	--	Josephine	20	1.20	10,697	\$450.43	\$166.98	100%	PAC
Biomass #3	n/a	Construction	--	Multnomah	20	1.80	12,851	\$413.36	\$29.86	100%	PGE
Wind #2	n/a	Construction	--	Klickitat, WA	20	56.00	166,700	\$674.87	\$13.50	30%	PAC
Wind #3	n/a	Construction	--	Klickitat, WA	20	56.00	166,700	\$674.87	\$13.50	30%	PAC
Hydro #1	n/a	Final Design		Linn	20	0.50	2,790	\$558.42	\$170.25	100%	PAC
Large solar #3	n/a	Construction	--	Multnomah	20.000	0.06	54	\$10,109.09	\$3,775.96	70%	PGE
				<b>2005</b>	<b>Operational</b>	<b>0.76</b>	<b>4,040</b>	<b>\$3,845,257</b>	<b>\$1,166,463.16</b>		
				<b>2006</b>	<b>Operational</b>	<b>3.66</b>	<b>17,517</b>	<b>\$8,627,427</b>	<b>\$1,201,571.60</b>		
				<b>Total</b>	<b>Operational</b>	<b>4.43</b>	<b>21,557</b>	<b>\$12,472,684</b>	<b>\$2,368,034.76</b>		
				<b>2006</b>	<b>Construction</b>	<b>115.64</b>	<b>359,936</b>	<b>\$238,269,061</b>	<b>\$7,535,309.88</b>		
				<b>Total Upon</b>	<b>Completion</b>	<b>120.07</b>	<b>381,492</b>	<b>\$250,741,746</b>	<b>\$9,903,344.64</b>		

**Table 14: Energy Trust Feasibility Studies and Other Projects (1/2005 – 12/2006)**

Project	Project Type	Location	Utility Service Territory	Cost to Energy Trust	Energy Trust Share	Other Investments Leveraged
Biomass #4	Proposal Development	Douglas	PAC	\$ 5,610	100%	NA
Biomass #5	Proposal Development	Jackson	PAC	\$ 3,185	100%	NA
Biomass #6	Proposal Development	Douglas	PAC	\$ 12,145	100%	NA
Biomass #7	Proposal Development	Linn	PGE	\$ 1,426	50%	Remainder paid by developer
Biomass #8	Proposal Development	Josephine	PAC	\$ 3,695	50%	Remainder paid by developer
Biomass #9	Feasibility Study	Jackson	PAC	\$ 14,088	50%	Remainder paid by developer
Biomass #10	Feasibility Study	Multnomah	PGE	\$ 4,200	50%	Remainder paid by developer
Biomass #11	Feasibility Study	Marion	PGE	\$ 2,000	25%	Remainder paid by developer and USDA matching grant
Biomass #12	Fuel Supply Study	Lake	PAC	\$ 25,000	50%	Remainder supplied by private developer and South Central Oregon Reinvestment Board
Biomass #13	Feasibility Study		PGE	\$ 22,500	25%	Remainder paid by developer
Biomass #14	Feasibility Study	Coos	PAC	\$ 5,990	50%	Remainder paid by developer
Biomass #15	Fuel Supply Study	Jackson & Josephine	PAC	\$ 23,963	31%	Title II (Secure Rural Schools) funds administered by BLM; funds from BLM Medford; and funds from ODOE
Biomass #16	Feasibility Study		PAC	\$ 6,882	50%	Remainder paid by developer
Biomass #17	Feasibility Study	Yamhill	PAC	\$ 20,000	25%	Remainder paid by developer
Biomass #18	Feasibility Study	Umatilla	PAC	\$ 23,000	50%	Remainder paid by developer
Biomass #19	Fuel Supply Study	Hood River	PAC or PGE	\$ 36,000	90%	Remainder paid by Hood River County and other jurisdictions
Biomass #20	Fuel Supply Study	Coos	PAC	\$ 30,000	26%	Remainder paid with OECDD grant and tribal funds
Biomass #21	Feasibility Study	Washington	PGE	\$ 25,000	50%	Remainder paid by agency
Hydro Study #1	Feasibility Study	Lake	PAC	\$ 10,000	63%	Remainder paid by city
Solar Study #1	Scoping Study	Clackamas	PGE	\$ 600	100%	NA
Solar Study #2	Scoping Study	Washington	PGE	\$ 360	100%	NA
Solar Study #3	Scoping Study	Washington	PGE	\$ 400	100%	NA
Hydro Study #2	Fuel Supply Study	Clackamas	PGE	\$ 1,400	100%	NA
Hydro Study #3	Scoping Study	Washington	PGE	\$ 480	100%	NA
Hydro Study #4	Scoping Study	Washington	PGE	\$ 480	100%	NA
Hydro Study #5	Scoping Study	Clackamas	PGE	\$ 1,800	100%	NA
Hydro Study #6	Feasibility Study	Hood River	PAC	\$ 25,000	31%	Remainder paid by Hood River County, other jurisdictions, and OECDD grant
Hydro Study #7	Fuel Supply Study	Multnomah	PGE/PAC	\$ 1,600	100%	NA
Solar Study #4	Fuel Supply Study	Clackamas	PGE	\$ 1,500	100%	NA
Solar Study #5	Fuel Supply Study	Multnomah	PGE	\$ 2,500	100%	NA
Solar Study #6	Fuel Supply Study	Multnomah	PAC	\$ 1,000	100%	NA
Solar Study #7	Fuel Supply Study	Yamhill	PAC	\$ 400	100%	NA
Solar Study #8	Fuel Supply Study	Washington	PGE	\$ 600	100%	NA
Solar Study #9	Fuel Supply Study	Washington	PGE	\$ 600	100%	NA
Community Wind Study #1	Feasibility Study	Umatilla	PAC or PGE	\$ 16,873	24%	USDA Grant - \$35,000, remainder by developer
Community Wind Study #2	Feasibility Study	Morrow/Gilliam	PAC or PGE	\$ 16,873	17%	USDA Grant - \$50,000, remainder by developer
Community Wind Study #3	Feasibility Study	Umatilla	PAC or PGE	\$ 7,000	10%	USDA Grant - \$35,000, remainder by developer
Community Wind Study #4	Feasibility Study	Sherman	PAC or PGE	\$ 16,873	17%	USDA Grant - \$50,000, remainder by developer
Community Wind Study #5	Feasibility Study	Wallowa	PAC	\$ 7,600	9%	USDA Grant - \$43,000, remainder by developer
Community Wind Study #5	Feasibility Study	Union	PAC	\$ 7,600	9%	USDA Grant - \$43,000, remainder by developer
Anemometer Loan Program	9 Feasibility Studies	Various	PAC and PGE	\$ 167,000	100%	17 anemometers installed todate
			<b>Total Costs:</b>	<b>\$ 553,223</b>		

### **3. OREGON HOUSING AND COMMUNITY SERVICES**

#### **OVERVIEW**

Oregon Housing and Community Services (OHCS) receives and administers PPC funds for low-income housing programs. Four and one-half percent of the PPC funds are dedicated to low-income housing development projects, either for construction of new housing or rehabilitation of existing housing for low-income families through the OHCS Housing Trust Fund. OHCS operates two weatherization programs, and an additional 11.7 percent of the total PPC funds collected are allocated for low-income weatherization. One program provides home weatherization (for single- and multi-family, owner occupied, and rental housing) and the other provides for weatherization of affordable multi-family rental housing through the OHCS Housing Division. In either case, housing projects supported by PPC funds for weatherization are required to have a conservation element.

Table 15 provides a summary of the Trust Fund and Weatherization portion of PPC fund receipts and expenditures from January 1, 2005 through December 31, 2006. Funds received by Oregon Housing and Community Services during this period amounted to \$21,590,154 and expenditures totaled \$32,455,242. (Note: this expenditure value includes \$11,578,409 in funds committed to projects that are not yet completed.)

**Table 15: OHCS Receipt and Expenditure Summary (1/2005 – 12/2006)**

<b>Transaction</b>	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b>Low-Income Weatherization</b>			
Administration	\$481,784	\$291,496	\$773,280
Evaluation, Training, and Technical Assistance	\$481,784	\$291,496	\$773,280
ECHO	\$7,371,300	\$4,459,884	\$11,831,184
Multi-Family Rental Housing	\$1,300,818	\$787,038	\$2,087,856
<b>Total Low-Income Weatherization</b>	<b>\$9,635,686</b>	<b>\$5,829,914</b>	<b>\$15,465,600</b>
<b>Low-Income Housing</b>			
Administration	\$194,109	\$112,119	\$306,228
Program	\$3,688,069	\$2,130,257	\$5,818,326
<b>Total Low-Income Housing</b>	<b>\$3,882,178</b>	<b>\$2,242,376</b>	<b>\$6,124,554</b>
<b>Total Fund Receipts</b>	<b>\$13,517,864</b>	<b>\$8,072,290</b>	<b>\$21,590,154</b>
<b>Expenditures</b>			
Low-Income Weatherization*	\$7,290,050	\$5,514,910	\$12,804,960
Committed but unexpended	\$4,267,026	\$2,031,380	\$6,298,406
Low-Income Housing**			\$6,438,469
Committed but unexpended			\$3,729,542
Administrative Expenses**			\$840,882
Evaluation, Training, Technical Assistance**			\$641,447
Committed but unexpended			\$204,190
Energy Education	\$57,214	\$93,861	\$151,075
Committed by unexpended	\$853,880	\$492,391	\$1,346,271
<b>Total Expenditures (w/o Committed)**</b>	<b>\$7,347,264</b>	<b>\$5,608,771</b>	<b>\$20,876,833</b>
<b>Total Expended and Committed**</b>	<b>\$12,468,170</b>	<b>\$8,132,542</b>	<b>\$32,455,242</b>

\*Includes the ECHO program and the Low-Income Weatherization Program (for multi-family rental housing).

\*\* Low-Income Housing, Administrative, and Evaluation Training and Technical Assistance expenditures are not tracked by utility.

Specific detail on the low-income housing program and low-income weatherization activities is provided subsequently.

## **LOW-INCOME HOUSING**

### **Receipts and Expenditures**

The Housing Development Grant Program (HDGP), commonly known as the Housing Trust Fund, was created in 1991 to expand the State’s supply of housing for low and very low-income families and individuals. The program provides grants and loans to construct new housing or to

acquire and/or rehabilitate existing structures. Seventy-five percent of program funds must support households whose gross income is at or below 50 percent of the area median income; the balance of the funds can support households with incomes up to 80 percent of the area median income. The majority of program resources are awarded through a competitive application process that occurs twice annually, once for the spring and once for the fall funding cycle. Funding preference is given to project applicants who provide services appropriate for the targeted tenant population.

Table 16 shows PPC fund receipts and expenditures for the low-income housing program. During the January 2005 – December 2006 period, a total of \$6,124,553 in PPC funds were allocated to Oregon Housing and Community Services to support low-income housing projects throughout the State. Expenditures from PPC revenue for projects developed during this period were \$6,438,469. An additional \$2,971,238 was expended for projects awarded funding prior to January 2005. Funds to pay project costs totaling \$3,729,542 were obligated but not spent as of December 31, 2006. In addition, allocations were made to four Regional Housing Centers to establish a program to acquire and rehabilitate single family residences for purchase by low income households. The one-time allocation to the Housing Centers will be recycled through the sale of the homes to continue the program for a period of 10 years.

**Table 16: Low-Income Housing Program Receipts and Expenditures  
(1/2005 – 12/2006)**

<b>Transaction</b>	<b>Total</b>
<b>Fund Receipts*</b>	<b>\$6,124,553</b>
<b>Expenditures</b>	
Committed but unexpended	\$3,729,542
Expenditures	\$6,438,469
<b>Total Expended and Committed</b>	<b>\$10,168,011</b>

## **Results**

Key accomplishments for the low-income housing program during the January 2005 – December 2006 period include the following:

- Sixty-five multi-family housing projects received HDGP awards that were either fully or partially funded with PPC revenue.
- HDGP funds helped eighteen counties in Oregon create affordable housing and support local jobs.
- Projects representing the construction or rehabilitation of 2,117 affordable units; and
- HDGP awards leveraging total project costs of \$243.3 million.

Additional detail on program accomplishments, including the characteristics of the low-income families served is shown in Table 17.

**Table 17: Low-Income Housing Accomplishments (1/2005-12/2006)**

<b>Accomplishment</b>	<b>Total</b>
<b>Number of Projects</b>	<b>65</b>
<b>Number of Units*</b>	<b>2,117</b>
<b>Population Served (# of housing units)</b>	
Elderly	321
Families***	1,051
<b>Special Needs (# of housing units)</b>	
Special Needs Groups**	692
Farm Workers	60
Units where household income is less than 80 percent of the area median income (Household income between 61-80%)	5
Units where household income is less than 60 percent of the area median income (Household income between 51-60%)	528
Units where household income is less than 50 percent the area median income (Household income between 41-50%)	1,125
Units where household income is less than 40 percent the area median income (Household income between 31-40%)	315
Units where household income is less than 30 percent the area median income	142

\*The total number of units may overstate the number of low-income families served by the program, as some projects have manager's units that do not require fixed rents or income. In some cases not all units in a project are targeted for low-income housing. Some group homes are counted as one unit but may serve up to 5 individual low-income residents.

\*\*Includes individuals in alcohol and drug recovery programs, ex-offenders, individuals with chronic mental illness, homeless, domestic violence, youth, HIV, and the developmentally disabled.

\*\*\*Figure includes 4 Regional Housing Centers establishing 4 single-family residences for purchase by low-income families. The original PPC funds provided to a Regional Housing Center will be recycled to continue ongoing program for a period of 10 years.

Table 18 shows how the low-income housing projects were distributed among Oregon's counties.

**Table 18: Low-Income Housing Projects by County (1/2005-12/2006)**

<b>County</b>	<b>Number of Projects</b>	<b>Number of Units in County</b>
Baker	2	39
Coos	1	40
Curry	2	37
Deschutes	1	97
Douglas	4	106
Jackson	5	233
Lake	1	16
Lane	7	157
Lincoln	1	60
Linn	4	36
Marion	3	88
Multnomah	10	818
Polk	3	80
Umatilla	2	16
Union	1	20
Wallowa	1	11
Washington	6	197
Yamhill	1	66
<b>18 counties</b>	<b>55 Projects</b>	<b>2,117 units</b>

## **LOW-INCOME WEATHERIZATION (MULTI-FAMILY RENTAL HOUSING)**

### **Receipts and Expenditures**

The Low-Income Weatherization program is designed to reduce the energy usage and utility costs of lower income tenants residing in affordable rental housing. The program provides grant funding for the construction or rehabilitation of affordable rental housing that is located in PGE or PacifiCorp service territories. Use of these funds requires that at least 50 percent of the units in the project be rented to households whose income is at or below 60 percent of the area median income (adjusted by family size) as defined by HUD. Projects receiving funds must also remain affordable for at least 10 years.

For each dollar invested, the project must demonstrate at least one kilowatt-hour in energy savings in the first year of operation. Program resources may be used for shell measures such as windows, doors, and insulation as well as energy-efficient appliances and lighting.

Table 19 shows the PPC fund receipts and expenditures allocated for low-income home weatherization. During this period, a total of \$2,087,856 in PPC funds was allocated to Oregon Housing and Community Services to support weatherization of rental housing projects within the State. Actual project expenditures were \$801,871 during this period while funds committed to projects totaled an additional \$1,755,554. Expenditures are less than committed funds as housing

development projects can take upwards of two years to complete and funds therefore need to be reserved over multiple years.

**Table 19: Low-Income Weatherization (Multi-Family Rental Housing)  
Receipts and Expenditures (1/2005 – 12/2006)**

<b>Transaction</b>	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b>Fund Receipts</b>	<b>\$1,308,818</b>	<b>\$787,038</b>	<b>\$2,087,856</b>
<b>Expenditures</b>			
Committed but unexpended	\$1,089	\$666,009	\$1,755,554
Expenditures	\$254,550	\$547,321	\$801,871
<b>Total Expended and Committed</b>	<b>\$1,344,095</b>	<b>\$1,213,330</b>	<b>\$2,557,425</b>

## Results

Key accomplishments for the January 2005 – December 2006 period include the following:

- 27 housing projects estimated to assist 1,262 households across Oregon were funded during this period with a combined total cost of almost \$162 million; and
- These 27 projects are expected to produce more than 1.5 million kWh in electricity savings in the first year of operation.

The low-income weatherization accomplishments are summarized in Table 20.

**Table 20: Low-Income Weatherization (Multi-Family Rental Housing) Accomplishments (1/2005 – 12/2006)**

<b>Accomplishment</b>	<b>Total</b>
Number of Projects	27
Number of Units*	1,262
Estimated kWh Savings	1,572,770
Population Served (# of housing units)	
Elderly	90
Families	609
Special Needs (# of housing units)	
Special Needs Groups**	432
Farm Workers	60
Units where household income is less than 80 percent of the area median income	159
Units where household income is less than 60 percent of the area median income	284
Units where household income is less than 50 percent of the area median income	521
Units where household income is less than 40 percent of the area median income	180
Units where household income is less than 30 percent of the area median income	105

\*The total number of units overstates the number of units actually served by the program: some projects have manager's units that do not require fixed rents or income, and all units at a project location are not necessarily 100 percent affordable. As a result, total units by rent add to less than total units.

\*\*Includes individuals in alcohol and drug recovery programs, ex-offenders, individuals with chronic mental illness, and the developmentally disabled.

Table 21 shows how the low-income weatherization projects were distributed among Oregon's counties.

**Table 21: Low-Income Weatherization Program by County (1/2005-12/2006)**

<b>County</b>	<b>Number of Projects</b>	<b>Number of Units in County</b>
Clackamas	1	24
Coos	1	39
Deschutes	1	141
Douglas	2	30
Jackson	2	94
Lane	1	53
Lincoln	1	60
Marion	3	145
Multnomah	5	569
Polk	3	80
Umatilla	1	6
Wallowa	1	11
<b>12 counties</b>	<b>22 Projects</b>	<b>1,262 units</b>

## **LOW-INCOME WEATHERIZATION (ECHO)**

### **Receipts and Expenditures**

A portion of the PPC allocated to Oregon Housing and Community Services goes into the Energy Conservation Helping Oregonians (ECHO) fund and is used for weatherization projects for low-income households.

Oregon Housing and Community Services (OHCS) contracts with local community action agencies (CAAs) to deliver the program. This local network of subgrantees determines applicant eligibility and delivers services. Qualifying households must apply through the local CAA and are placed on a weatherization waiting list. The waiting period varies with each local agency depending on local need, but households with senior and disabled members and households with children under six years of age are given priority. Once a home is scheduled for weatherization, the applicant is contacted and an energy audit is scheduled. The energy audit determines the appropriate measure to be initiated based on the existing condition of the home and the funds available. Program resources can be used for shell measures that may include:

- Ceiling, wall, and floor insulation
- Energy-related minor home repairs
- Energy conservation education
- Air infiltration reduction
- Furnace repair and replacement
- Heating duct improvements

Completed work is inspected by the local agency to ensure compliance with program standards. For each dollar invested, the project/unit must also demonstrate at least 1 kilowatt-hour in energy savings in the first year of operation.

Table 22 shows the PPC fund receipts and expenditures allocated for low-income home weatherization. During this period, \$11,831,184 in PPC funds was designated for low-income weatherization from January 1, 2005 to December 31, 2006. Expenditures on completed weatherization projects during the same period totaled \$12,003,089 with an additional \$4,542,852 reserved for projects that had not been completed as of December 31, 2006.

**Table 22: Low-Income Weatherization (ECHO) Program Receipts and Expenditures (1/2005-12/2006)**

<b>Transaction</b>	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b>Fund Receipts</b>	<b>\$7,371,300</b>	<b>\$4,459,884</b>	<b>\$11,831,184</b>
<b>Expenditures</b>			
Committed but unexpended	\$3,177,481	\$1,365,371	\$4,542,852
Expenditures	\$7,035,500	\$4,967,589	\$12,003,089
<b>Total Expended and Committed</b>	<b>\$10,212,981</b>	<b>\$6,332,960</b>	<b>\$16,545,941</b>

## **Results**

The low-income weatherization accomplishments are summarized in Table 23. Since the beginning of 2005, this program resulted in the weatherization of 4,123 homes with a combined estimated electricity savings of 16,830,086 kWh. These program efforts have directly benefited 6,649 people, the majority of whom are in demographic groups that tend to include the elderly, disabled individuals, and young children.

**Table 23: Low-Income Weatherization (ECHO) Program Accomplishments (1/2005-12/2006)**

<b>Accomplishment</b>	<b>Total</b>
<b>Number of Homes Weatherized</b>	<b>4,123</b>
<b>Annual kWh Savings</b>	<b>16,830,086</b>
<b>Total Population Served</b>	<b>6,649</b>
<b>Special Target Populations Served</b>	
Elderly (>60 years old)	1,853
Children (<6 years old)	1,029
Handicapped	1,232
Farm Workers	56
Native American	220
Hispanic	1,459
African American	98
Asian	101

## **4. EDUCATIONAL SERVICE DISTRICTS**

### **OVERVIEW**

Each year, 10 percent of PPC funds are allocated to the 17 Educational Service Districts (ESDs) located within PGE and PacifiCorp service territories; statewide, 863 schools (112 districts and 394,722 students) are eligible for PPC funding. These funds are used for cost-effective energy conservation projects at individual schools within each ESD and must follow a specific spending directive. First, all schools within a school district must complete an energy audit to identify cost-effective conservation opportunities. After all the schools have completed the audit, PPC funds are used to pay for 100 percent of the installation cost for the energy efficiency measures identified during the audits. After all of the recommended measures have been installed, any remaining funds may be used to pay for additional energy conservation measures, energy conservation education, and renewable energy projects at schools within the ESD.

The Oregon Department of Energy provides program oversight for the ESD audits and projects to ensure consistency across ESDs and to verify that projects adhere to the guidelines established for this program. Although the Oregon Department of Energy has oversight for this program, the individual ESDs receive their PPC funds directly from the utilities.

### **RECEIPTS AND EXPENDITURES**

Table 24 provides a summary of the ESD portion of PPC fund receipts and expenditures from January 1, 2005 through December 31, 2006. In addition to the normal program administrative expenses defined earlier, this program has additional administrative expenses for each ESD and school district. Total administrative costs for schools, then, equal \$546,160 and comprise 3.7 percent of total expenditures over this period, and 4.1 percent of the PPC allocated to Oregon schools.

**Table 24: ESD Receipt and Expenditure Summary (1/2005 – 12/2006)**

<b>Transaction</b>	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b># of ESDs Receiving Funds</b>	<b>5</b>	<b>15</b>	<b>20</b>
<b>Total Fund Receipts</b>	<b>\$8,274,173</b>	<b>\$4,979,132</b>	<b>\$13,253,305</b>
<b>Expenditures</b>			
Audits	\$295,563	\$295,614	\$591,177
Conservation Measures Installed	\$11,195,222	\$1,961,663	\$13,156,885
ESD and School District Administrative Expenses			\$385,567
ODOE Administrative Expenses			\$160,593
ODOE Program Expenses			\$404,870
<b>Total Expenditures</b>	<b>\$11,490,785</b>	<b>\$2,257,277</b>	<b>\$14,699,092</b>

## **RESULTS**

To date, among the 863 schools that are eligible for PPC funds, 825 (95 percent) have completed audits. A total of 5,895 individual energy efficiency measures have been identified in these audits, and 929 (15 percent) of the energy efficiency measures have been implemented. To date, there has not been enough PPC funding available for school districts to implement all the measures identified in the energy audits.

Table 25 shows the results of audits completed during the January 2005 – December 2006 period. During this time, 197 audits were completed across 25 school districts. The audits identified 1,143 conservation measures that could be installed cost-effectively. If all of these measures were adopted, they would result in 14,519,753 kWh in electricity savings annually and 379,439 in therm savings for natural gas. The energy savings measures identified translate to \$2,123,099 in potential utility bill savings each year if all the measures identified in these audits are adopted.

**Table 25: ESD Audit Results (1/2005 – 12/2006)**

<b>Audit Accomplishment</b>	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b># of Audits Completed</b>	<b>104</b>	<b>93</b>	<b>197</b>
<b># of School Districts</b>	<b>8</b>	<b>17</b>	<b>25</b>
<b># of Measures Identified</b>	<b>610</b>	<b>533</b>	<b>1,143</b>
<b>Simple Payback – Median Years</b>	<b>11.80</b>	<b>14.20</b>	<b>13.00</b>
<b>Simple Payback – Mean Years</b>	<b>15.86</b>	<b>20.44</b>	<b>18.15</b>
<b>Simple Payback – Years Range</b>	<b>0.1 - 89</b>	<b>0.2 – 84.9</b>	<b>N/A</b>
<b>Potential Savings Identified in Audits</b>			
Electricity Savings (kWh)	5,427,273	9,092,480	14,519,753
Natural Gas Savings (therms)	73,996	305,443	379,439
Other Fuels (gal)	319,185	216,636	535,821
Total Annual Energy Cost Savings (\$)	\$982,086	\$1,141,013	\$2,123,099
Total Savings (Btu)	73,762,131,949	93,695,118,640	167,457,250,589
<b>Total Cost of Measures Identified</b>	<b>\$17,807,452</b>	<b>\$24,272,131</b>	<b>\$42,079,583</b>

PPC funds are also used to install the measures identified through the school audits, and the accomplishments related to actual measure installations are shown in Table 26. During the same period, 427 measures identified during audits were installed across 322 school districts. Measures that are typically installed include: Retrofitting T-12 lamps and magnetic ballasts with T8 or T5 lamps and electronic ballasts, replacing HID lighting with T5 fixtures, installing occupancy sensors for lighting and HVAC control, direct digital control systems to control lighting and heating and cooling equipment, HVAC distribution system upgrades, and boiler retrofits and replacement.. These measures are expected to save 9,475,250 kWh in electricity and 333,895 therms of natural gas annually. Total savings to the schools from the installation of these measures is estimated to be \$912,327 each year.

**Table 26: ESD Efficiency Measures Installed (1/2005 – 12/2006)**

<b>Measure Accomplishment</b>	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b># of Audit Measures Installed</b>	<b>353</b>	<b>74</b>	<b>427</b>
<b># of School Districts</b>	<b>266</b>	<b>56</b>	<b>322</b>
<b>Annual Savings</b>			
Electricity Savings (kWh)	7,725,533	1,749,717	9,475,250
Natural Gas Savings (therms)	269,549	64,346	333,895
Other Fuels (gal)	44,024	10,564	54,588
Total Annual Energy Cost Savings (\$)	\$752,373	\$159,954	\$912,327
Total Annual Energy Savings (Btu)	59,830,292,129	13,990,984,121	73,821,276,250
<b>Total Cost of Measures Installed</b>	<b>\$11,195,222</b>	<b>\$1,961,662</b>	<b>\$13,156,884</b>

## 5. SELF-DIRECT CUSTOMERS

### OVERVIEW

Large commercial and industrial energy customers who fund their own efficiency projects (self-direct customers) can waive a portion of their public purpose charge. The Oregon Department of Energy maintains a database to help these customers individually calculate their monthly PPC responsibility. First, self-direct customers submit notice of efficiency projects to the Department of Energy for approval; projects are certified when completed and certified project amounts are recorded on customers' accounts. These "credits" can then be applied to public purpose charges on customers' utility bills. Self-direct customers who use such credits still qualify for at least 50 percent of Energy Trust incentives for other energy projects at the same site. Forty large energy customers in the PGE and PacifiCorp territories are currently active in the self-direct program or have pending applications.

Note that available project credits can be carried forward month-to-month, so credits claimed do not necessarily equal project expenditures in a given period. From January 2005 through December 2006, self-direct customers in the PacifiCorp service territory claimed \$624,896 in credits for conservation and renewable resource projects, and customers in the PGE service territory claimed \$3,576,503. Combined, self-direct customers of both utilities claimed \$3,039,216 in conservation credit and \$1,162,183 in renewable resource credit from January 2005 through December 2006.

### RESULTS

Table 27 summarizes self-direct program conservation activity from January 2005 through December 2006. During this period, self-direction sites implemented projects that involved controls, HVAC system improvements, industrial process modifications, lighting and motor improvements. PGE customers certified 16 conservation projects (5 in Clackamas County, 5 in Multnomah County, and 6 in Washington County) with a total eligible cost of \$2,145,208, and PacifiCorp customers certified 1 project (in Linn County) with a total eligible cost of \$1.15 million. The combined effect of these projects is about 10.6 million kWh in energy savings annually, or \$525,984 in annual energy cost savings.

**Table 27: Self-Direct Program Certified Conservation Projects  
(1/2005 – 12/2006)**

	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b>Projects Certified</b>	16	1	17
<b>Total Eligible Cost</b>	\$2,145,208	\$1,156,180	\$3,301,388
<b>Total Energy Cost Savings (annual)</b>	\$412,633	\$113,351	\$525,984
<b>Total Energy Savings (annual kWh)</b>	7,403,968	3,202,000	10,605,968

Table 28 summarizes self-direct program renewable energy projects from January 2005 through December 2006. One PGE customer certified a large biomass electricity generation project with

a total above market cost of \$33.7 million. In addition, 9 PacifiCorp customers (9 sites) jointly certified 1 project in Jackson County with a total above market cost of about \$278,000. The combined effect of these projects is about 96 million kWh of renewable energy produced annually.

**Table 28: Self-Direct Program Certified Renewable Energy Projects  
(1/2005 – 12/2006)**

	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b>Projects Certified</b>	1	1	2
<b>Total Above Market Cost</b>	\$33,760,076	\$277,794	\$34,037,870
<b>Total Energy Produced (annual kWh)</b>	96,000,000	96,894	96,096,894

Table 29 summarizes self-direct program green tag renewable energy purchases from January 2005 through December 2006. PGE customers purchased over 86,000 green tags valued at \$1.2 million, and PacifiCorp customers purchased nearly 18,000 green tags valued at \$130,973. The combined effect of these contracts is nearly 104 million kWh of renewable energy purchased annually. The Oregon Department of Energy incurred administrative costs of \$18,701 and program expenses of \$52,161 to process all conservation, renewable energy, and green tag projects.

**Table 29: Self-Direct Program Green Tag Purchases  
(1/2005 – 12/2006)**

	<b>PGE</b>	<b>PacifiCorp</b>	<b>Total</b>
<b>Sites</b>	15	2	17
<b>Green Tags Purchased</b>	86,016	17,720	103,740
<b>Credits Issued</b>	\$1,219,777	\$130,973	\$1,350,750
<b>Energy Purchased (annual kWh)</b>	86,017,008	17,720,400	103,737,390

## 6. SUMMARY

Table 30 summarizes the expenditures and results for PPC expenditures from January 2005 through December 2006. The agencies spent a combined total of \$126,070,476 on programs and projects completed during this period. Annual energy savings and renewable resource generation achieved from projects completed during this time reached 790,583,800 kWh (90 aMW), which is enough to power more than 54,000 average-sized homes each year.<sup>9</sup> When all fuel types are included in addition to electricity, PPC expenditures resulted in annual savings of 2,739,744 million Btu.

**Table 30: Summary of PPC Expenditures and Results (1/2005 – 12/2006)**

Agency / Program	Expenditures	Results		
		kWh Saved or Generated	aMW	MMBtu
Energy Trust – Conservation	\$80,837,638	530,708,442	60.58	1,811,308
Energy Trust – Renewables*	5,384,651	21,557,000	2.46	73,574
Education Service Districts**	\$14,699,092	9,475,250	1.08	73,821
OHCS Low-Income***	\$20,876,833	18,402,856	2.10	62,809
Self-Direct Customers****	\$4,272,262	210,440,252	24.02	718,233
<b>Total Expenditures</b>	<b>\$126,070,476</b>	<b>790,583,800</b>	<b>90.25</b>	<b>2,739,744</b>

\* Energy saved includes savings from reduced transmission and distribution losses. Renewable energy savings is from currently operational projects.

\*\* MMBtu includes natural gas, propane and oil savings, in addition to electricity savings.

\*\*\*Expenditures for the OHCS Low-Income program include expenditures from the Housing Trust Fund, which does not track energy savings for its projects.

\*\*\*\*Expenditures listed for Self-Direct represent public purpose charges retained by the participating sites in lieu of making payments to the utilities, which are then distributed among the other agencies (e.g., Energy Trust)

<sup>9</sup> Calculated using the Northwest Power Planning Council's estimate that an average megawatt is enough to power 600 homes each year (assuming electric heat).