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IDAHO PUBLIC  
UTILITIES COMMISSION

BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

IN THE MATTER OF THE )  
APPLICATION OF IDAHO POWER ) CASE NO. IPC-E-08-3  
COMPANY FOR AUTHORITY TO )  
REVISE THE ENERGY EFFICIENCY )  
RIDER, TARIFF SCHEDULE 91 )  
\_\_\_\_\_ )  
)

IDAHO POWER COMPANY

DIRECT TESTIMONY

OF

TIMOTHY E. TATUM

1           A.       My name is Timothy E. Tatum and my business  
2 address is 1221 West Idaho Street, Boise, Idaho.

3           Q.       By whom are you employed and in what  
4 capacity?

5           A.       I am employed by Idaho Power Company  
6 (Company) as a Senior Pricing Analyst in the Pricing and  
7 Regulatory Services Department.

8           Q.       Please describe your educational background.

9           A.       I received a Bachelor of Business  
10 Administration degree in Economics from Boise State  
11 University in 2001. In 2005, I earned a Master of Business  
12 Administration degree from Boise State University. I have  
13 also attended electric utility ratemaking courses including  
14 "Practical Skills For The Changing Electrical Industry" a  
15 course offered through New Mexico State University's Center  
16 For Public Utilities, "Introduction to Rate Design and Cost  
17 of Service Concepts and Techniques" presented by Electric  
18 Utilities Consultants, Inc. and Edison Electric Institute's  
19 "Electric Rates Advanced Course."

20          Q.       Please describe your work experience with  
21 Idaho Power Company.

22          A.       I became employed by Idaho Power Company in  
23 1996 as a Customer Service Representative in the Company's  
24 Customer Service Center. Over the first two years I handled  
25 customer phone calls and other customer-related

1 transactions. In 1999, I began working in the Customer  
2 Account Management Center where I was responsible for  
3 customer account maintenance in the area of billing and  
4 metering.

5 In June of 2003, after seven years in  
6 customer service, I began working as an Economic Analyst on  
7 the Energy Efficiency Team. As an Economic Analyst, I  
8 maintained proper accounting for Demand-Side Management  
9 (DSM) expenditures, prepared and reported DSM program  
10 accounting and activity to management and various external  
11 stakeholders, conducted cost-benefit analyses of DSM  
12 programs, and provided DSM analysis support for the  
13 Company's 2004 Integrated Resource Plan (IRP).

14 In August of 2004, I accepted a position as a  
15 Pricing Analyst in Pricing and Regulatory Services. As a  
16 Pricing Analyst, I provided support for the Company's  
17 various regulatory activities including tariff  
18 administration, regulatory ratemaking and compliance  
19 filings, and the development of various pricing strategies  
20 and policies.

21 In August of 2006, I was promoted to Senior  
22 Pricing Analyst. As a Senior Pricing Analyst my  
23 responsibilities have expanded to include the development of  
24 complex financial studies to determine revenue recovery and  
25 pricing strategies including the preparation of the

1 Company's cost-of-service studies.

2 Q. What is the scope of your testimony in this  
3 proceeding?

4 A. My testimony will address the Company's  
5 proposal for increasing the Energy Efficiency Rider amount  
6 from the current level of 1.5 percent to 2.5 percent of base  
7 revenue and the removal of the funding caps for residential  
8 and irrigation customers. Furthermore, my testimony will  
9 recommend a DSM funding strategy that will, over time,  
10 provide a level of funding necessary to sufficiently fund  
11 the Company's increased investment in demand-side management  
12 (DSM) programs and other energy efficiency initiatives.

13 Q. Please explain how the current Energy  
14 Efficiency Rider came into being.

15 A. In Order No. 28722 issued in Case Nos. IPC-E-  
16 01-07 and IPC-E-01-11, the Company's 2001-2002 Power Cost  
17 Adjustment (PCA) case, the Commission directed Idaho Power  
18 to develop and file a comprehensive DSM program to provide  
19 customers with opportunities to reduce electric consumption.  
20 The Company complied with the Commission's directive through  
21 a filing made on July 31, 2001, which the Commission  
22 docketed as Case No. IPC-E-01-13. In the compliance filing  
23 the Company identified a number of potential DSM programs  
24 that could be implemented to assist customers in reducing  
25 their bills and proposed that the expenditures for the

1 analysis and implementation of energy conservation programs  
2 be funded through a charge known as the Energy Efficiency  
3 Rider (Rider). On November 21, 2001 the Commission issued  
4 Order No. 28894 directing the Company to implement limited  
5 DSM programs for the 2001-2002 winter heating season and to  
6 organize the Energy Efficiency Advisory Group (EEAG) to  
7 advise the Company on the implementation of long-term DSM  
8 programs. Through Order No. 28894 the Commission postponed  
9 the consideration of funding of DSM programs until the  
10 Company's 2002-2003 PCA filing was made in the spring of  
11 2002. In April 2002 the Energy Efficiency Advisory Group,  
12 comprised of members from the Company's customer groups,  
13 technical experts, special interest groups, Commission  
14 Staff, and Company personnel, was formed. On May 13, 2002,  
15 the Commission issued Order No. 29026 authorizing the  
16 implementation of the Energy Efficiency Rider as a means to  
17 fund DSM programs. The Rider amount for each customer class  
18 targeted a level approximately equal to .5 percent of  
19 overall class revenue.

20 On December 7, 2004, the Company requested  
21 authority to increase the Rider to 1.5% of base revenue  
22 applied uniformly to all customer classes, which the  
23 Commission docketed as Case No. IPC-E-04-29. The Commission  
24 issued Order No. 29784 on May 13, 2005, authorizing the  
25 current Rider amount of 1.5 percent of base revenue with a

1 monthly funding cap of \$1.75 for residential customers and a  
2 cap of \$50 per meter per month for irrigation customers.

3 Q. You mentioned that you will recommend a  
4 strategy that will provide a level of funding necessary to  
5 sufficiently fund the Company's increased investment in DSM  
6 programs and other energy efficiency initiatives. Please  
7 define the Company's "increased investment" DSM programs and  
8 other energy efficiency initiatives.

9 A. The Company's "increased investment" in DSM  
10 programs and other energy efficiency initiatives represents:  
11 1) the costs associated with achieving the planned DSM  
12 activities detailed in Case No. IPC-E-04-29, 2) the  
13 investment necessary to implement the DSM resources  
14 identified in the 2006 IRP and 3) the costs associated with  
15 the continued operation of two DSM programs formerly funded  
16 by the Bonneville Power Administration's (BPA) Conservation  
17 Rate Credit (CRC) Program.

18 In Case No. IPC-E-04-29, the Company estimated that  
19 a Rider funding level of 1.5 percent of base revenues would  
20 adequately fund the Company's planned DSM activities through  
21 June of 2007 at which time additional funding would be  
22 required. The Company's planned DSM activities at that time  
23 included the implementation of the 2004 IRP identified DSM  
24 programs, other customer-focused energy efficiency programs,  
25 the Company's continued participation in the Northwest

1 Energy Efficiency Alliance (NEEA), DSM research and studies,  
2 and incremental DSM administrative costs.

3           Since the issuance of Order No. 29784 in Case No.  
4 IPC-E-04-29, Idaho Power has successfully implemented the  
5 DSM programs identified in the 2004 IRP and carried out the  
6 other planned DSM activities identified in that case. In  
7 addition, Idaho Power has also implemented four new DSM  
8 programs to acquire the DSM resources identified in the 2006  
9 IRP. Furthermore, following the suspension of the BPA's CRC  
10 Program, two programs developed by the BPA and implemented  
11 by the Company began receiving Rider funding in mid-2007.

12           Q.       Please describe the DSM programs and energy  
13 efficiency initiatives that were funded with the Rider  
14 during 2007.

15           A.       Idaho Power's Rider-funded DSM efforts are  
16 most effectively described when organized into four distinct  
17 categories: programs identified through the 2004 IRP process  
18 (2004 IRP Programs), programs identified through the 2006  
19 IRP process (2006 IRP Programs), programs developed by the  
20 BPA (BPA Programs) and other energy efficiency initiatives.  
21 A complete description of the programs funded by the Rider  
22 during 2007 can be found in the Demand-Side Management  
23 Annual Report for 2007 included in Exhibit No. 1 to my  
24 testimony.

25           The 2004 IRP programs include the ENERGY STAR® Homes

1 Northwest and the A/C Cool Credit programs for residential  
2 customers, the Building Efficiency program for commercial  
3 customers, the Industrial Efficiency Program (renamed Custom  
4 Efficiency in 2007) for industrial customers and the  
5 Irrigation Efficiency Rewards Program and Irrigation Peak  
6 Rewards Program for irrigation customers. These programs  
7 were designed to achieve approximately 20 average megawatts  
8 (aMW) of energy efficiency and 76 megawatts (MW) of demand  
9 response over a ten-year period.

10 The 2006 IRP identified an additional 88 aMW of  
11 cost-effective energy efficiency opportunities in the  
12 residential, commercial and industrial customer classes to  
13 be acquired by 2025. The 2006 IRP Programs include ENERGY  
14 STAR<sup>®</sup> Lighting and Heating and Cooling Efficiency for  
15 residential customers and the Easy Upgrades and Custom  
16 Efficiency programs for commercial and industrial customers.  
17 In 2007, the Rider also funded the development of another  
18 2006 IRP Program designed to encourage residential customers  
19 to purchase energy-efficient appliances. This program is  
20 expected to become available to customers in 2008.

21 The BPA Programs include the Rebate Advantage and  
22 Energy House Calls programs. These programs encourage  
23 energy-efficiencies in manufactured housing.

24 Other energy efficiency initiatives include NEEA,  
25 numerous small projects, energy efficiency training

1 seminars, educational workshops and scholarships.

2 Q. How did the Company determine the cost-  
3 effectiveness of the 2006 IRP Programs?

4 A. The Company determined the cost-effectiveness  
5 of the 2006 IRP Programs using a method similar to that used  
6 in the 2004 IRP analysis. This method is described in detail  
7 on pages 62 through 73 of Appendix D-Technical Appendix For  
8 the 2006 Integrated Resource Plan included in my Exhibit No.  
9 2. As can be seen on the table at the bottom of page 73 of  
10 Exhibit No. 2, each of the DSM program options has a  
11 benefit-cost ratio greater than one from both the utility  
12 cost and total resource cost perspectives. A benefit-cost  
13 ratio greater than one indicates that the present value of  
14 the avoided resource cost, or the benefit of the DSM  
15 program, exceeds the present value of the costs to implement  
16 the program.

17 Q. Did the EEAG provide input and guidance into  
18 the development of the 2006 IRP Programs?

19 A. Yes. The EEAG continues to be an integral  
20 part of the development and monitoring of the Company's DSM  
21 programs. In recent years, the EEAG has been particularly  
22 effective in helping to shape the marketing strategies for  
23 both new and existing DSM programs. EEAG input and guidance  
24 was incorporated into each of the 2006 IRP Programs prior to  
25 their initial launch.

1 Q. What is the amount of annual funding required  
2 to support the Company's DSM Programs and other energy  
3 efficiency initiatives during 2008 through 2010?

4 A. Exhibit No. 3, Table I details the expected  
5 expenditures for DSM programs by customer class through  
6 2010. As can be seen from this exhibit, the expected  
7 program expenditures for 2008 through 2010 are \$19,293,284,  
8 \$16,787,116 and \$17,028,738 respectively. The total DSM  
9 program cost for the three-year period is approximately \$53  
10 million.

11 Q. Please describe why you believe the current  
12 Rider amount is not adequate to fund the Company's planned  
13 DSM expenditures.

14 A. The current Rider collects approximately \$8.8  
15 million a year to fund Idaho Power's DSM programs and other  
16 energy efficiency initiatives. At the current 1.5 percent  
17 funding level, the Rider balancing account is expected to  
18 accumulate a deficit of nearly \$3.2 million by June 1, 2008.  
19 Based on the Company's expected DSM program expenditures for  
20 2008, the deficit balance is expected to grow to an  
21 estimated \$8.8 million by year-end 2008 at the current 1.5  
22 percent funding level.

23 Q. What is your proposal for increasing the  
24 Rider in order to support the expected program expenditures?

25 A. I propose the Rider be increased from the

1 current 1.5 percent level to 2.5 percent beginning June 1,  
2 2008. Exhibit No. 3, Table II, details the expected annual  
3 program costs, the anticipated Rider funding at the  
4 recommended level, and the Rider fund balance remaining at  
5 the end of each year, 2008 through 2010.

6 Q. Table II of Exhibit No. 3 identifies a  
7 deficit in the Rider fund balance at the end of each of the  
8 three years with a deficit balance of approximately \$4.2  
9 million at the end of 2010. Please explain why you are  
10 recommending a Rider percentage that does not provide  
11 funding to support the total cost for the identified DSM  
12 programs and other energy efficiency initiatives over the  
13 three-year period.

14 A. Since its inception, the Rider has funded the  
15 incremental labor and administrative expenses associated  
16 with implementing the Company's DSM programs and other  
17 energy efficiency initiatives. Over time, DSM has become  
18 increasingly more integrated into the Company's business  
19 both operationally and strategically. With that in mind,  
20 it seems reasonable to consider including the ongoing labor  
21 and administrative expenses associated with the Company's  
22 DSM activities into the general operations and maintenance  
23 (O&M) expenses recovered through base rates. Following that  
24 rationale, Idaho Power plans to include in its next general  
25 rate case filing a known and measureable adjustment to the

1 test year O&M expenses to reflect the ongoing labor and  
2 administrative expenses required to support its planned DSM  
3 efforts currently funded by the Rider. Including these  
4 ongoing labor and administrative expenses in O&M and  
5 recovering them through base rates will allow the 2.5  
6 percent Rider to adequately fund the Company's planned DSM  
7 efforts beyond 2010.

8 Q. How does the Company plan to recover the  
9 ongoing labor and administrative expenses until these costs  
10 are included in base rates approved by the Commission?

11 A. The Company plans to continue to recover  
12 these expenses through the Rider funding until the  
13 Commission approved base rates that include the known and  
14 measureable adjustment referred to above become effective.

15 Q. What are the Company's plans should the  
16 ongoing labor and administrative expenses not be included in  
17 base rates beginning January 1, 2009?

18 A. The Company plans to continue funding these  
19 costs through the Rider until they are included in base  
20 rates. Should these costs not be included in base rates  
21 beginning January 1, 2009, the Company will continue to  
22 monitor the Rider account to ensure that the funding  
23 percentage adequately supports the ongoing labor and  
24 administrative expenses.

25 Q. What cost categories does the Company

1 classify as ongoing labor and administrative expenses?

2 A. The cost categories that are classified as  
3 ongoing labor and administrative expenses include the labor  
4 costs associated with operating and supporting DSM programs  
5 and energy efficiency initiatives, NEEA contributions and  
6 other DSM departmental costs not directly related to a  
7 specific DSM program.

8 Q. What is the estimated annual dollar impact of  
9 including the ongoing labor and administrative expenses into  
10 the Company's O&M expenses?

11 A. The Company expects to spend approximately  
12 \$3.5 million annually on labor and administrative expenses  
13 to support its ongoing DSM efforts.

14 Q. Have you prepared an exhibit that details the  
15 estimated Rider fund balance remaining at the end of each  
16 year 2008 through 2010 with the ongoing labor and  
17 administrative expenses removed in the years 2009 and 2010?

18 A. Yes. Exhibit 3, Table III, details the  
19 estimated Rider fund balance remaining at the end of each  
20 year for 2008 through 2010 with the ongoing labor and  
21 administrative expenses removed in the years 2009 and 2010.  
22 The estimates detailed in Table III were derived under the  
23 assumption that the ongoing labor and administrative  
24 expenses would no longer be funded by the Rider beginning  
25 January 1, 2009. This assumption is, of course, contingent

1 upon the Company filing and the Commission subsequently  
2 approving a General Rate Case by that date. As can be seen  
3 from this exhibit, the expected Rider fund balance at the  
4 end of 2010 is a surplus of \$2,519,560.

5 Q. Exhibit 3, Table III, shows that the Rider  
6 account is expected to have deficits of \$4,583,626 at year-  
7 end 2008 and \$1,209,934 at year-end 2009. Why did the  
8 Company not choose a funding strategy that would more  
9 closely match funding with expenditures during 2008 and  
10 2009?

11 A. One of the primary objectives guiding the  
12 development of the proposed funding strategy was to provide  
13 a level of funding adequate to support the Company's planned  
14 DSM programs and other energy efficiency initiatives while  
15 maintaining rate stability for customers. Due to the timing  
16 of this filing and the variability in the Rider funded  
17 activities, significant annual adjustments to the Rider  
18 percentage would be required to maintain a near zero balance  
19 in the Rider account over the next few years. The  
20 recommended proposal minimizes annual adjustments to the  
21 Rider percentage and, over time, adequately funds the  
22 Company's planned DSM programs and other energy efficiency  
23 initiatives.

24 Q. Does Idaho Power intend to deviate from its  
25 previously established DSM program targets as a result of

1 this funding proposal?

2 A. No. Under the proposed DSM funding strategy,  
3 the Company plans to continue to pursue all cost-effective  
4 DSM in 2008 and beyond. DSM is an important part of Idaho  
5 Power's future resource acquisition strategy and the Company  
6 is prepared to operate with a deficit in the Rider account  
7 in the short-term in order to achieve the previously stated  
8 objectives.

9 Q. You have proposed to eliminate the current  
10 funding caps for residential and irrigation customers. Will  
11 the elimination of the current funding caps result in  
12 equitable cost recovery between the customer classes?

13 A. Yes. Idaho Power has a broad offering of  
14 cost-effective DSM programs available to all of the major  
15 customer classes including residential and irrigation  
16 customers. Each of the Company's DSM programs is detailed in  
17 Exhibit No. 1, the 2007 DSM Annual Report. DSM programs are  
18 considered to be cost-effective when energy savings and/or  
19 demand reduction can be achieved at a lower cost than the  
20 next best resource alternative. As Idaho Power acquires  
21 cost-effective DSM and the benefit of avoiding higher  
22 resource costs is reflected in rates, all customers benefit  
23 from the savings in proportion to their energy usage. With  
24 that in mind, it is both fair and reasonable to require  
25 residential and irrigation customers to fund the Company's

1 DSM programs in the same manner as all other customer  
2 classes, without any artificial funding caps.

3 Q. Are you recommending that the proposed Rider  
4 funding expire at the end of the three-year period, or on  
5 December 31, 2010?

6 A. No. I am recommending that the 2.5 percent  
7 Rider which I have proposed become effective on June 1, 2008  
8 remain in place until it is determined that a different  
9 funding level is appropriate as a result of a proceeding  
10 before the Commission.

11 Q. Have you prepared an exhibit that details the  
12 funding to be collected from each customer class under your  
13 proposal?

14 A. Yes. Exhibit No. 4 details the annual  
15 funding to be provided by each customer class. As can be  
16 seen from Exhibit No.4, should the 2.5 percent Rider become  
17 effective on June 1, 2008, the annual funding is estimated  
18 to be \$13,226,583 in 2008, \$16,928,949 in 2009 and  
19 \$17,275,217 in 2010.

20 Q. Please explain why you are taking into  
21 account only the first three years of projected program  
22 expenditures?

23 A. There are several issues that may affect the  
24 adequacy of the proposed Rider funding by the end of the  
25 three-year period. First, the Company will file its next

1 IRP in 2009. To the extent that additional DSM programs are  
2 selected as part of the preferred resource portfolio, an  
3 additional adjustment to the Rider may be needed. Second,  
4 due to the nature of DSM programs and the inherent risk that  
5 customers either will not choose to participate at the  
6 target level or will choose to participate at a level  
7 greater than the target, the estimated program costs used to  
8 determine the required funding level may be overstated or  
9 understated. And third, Idaho Power is continually  
10 exploring potential resource opportunities that may arise  
11 through changes in economic considerations, advances in  
12 technology or other new innovations. Given the uncertainty  
13 surrounding these issues, the Company plans to monitor the  
14 adequacy of Rider funds on a periodic basis. If an  
15 adjustment to the funding level needs to be made at the end  
16 of the three-year period, or sooner, the Company will file a  
17 request with the Commission to balance the account.

18 Q. Are you proposing any other changes to the  
19 structure or the scope of the Rider?

20 A. Yes. Included as Exhibit No. 5 is a revised  
21 Schedule 91 in legislative format. As can be seen from  
22 Exhibit No. 5, the revised Schedule 91 includes new language  
23 expanding the scope of the Rider-funded activities to  
24 include the analysis and implementation of programs and  
25 initiatives that promote renewable energy options. The

1 Company would like to expand its involvement in encouraging  
2 customers to install small-scale renewable energy options  
3 and views the Rider as a logical mechanism to fund that  
4 objective. However, this would require that Idaho Power  
5 depart from its traditional cost-effectiveness criteria for  
6 Rider-funded programs.

7 Q. Please describe the Company's traditional  
8 cost-effectiveness criteria for Rider-funded programs.

9 A. The Company has traditionally evaluated  
10 Rider-funded programs for cost-effectiveness from both the  
11 utility cost test and total resource cost test perspectives.  
12 The utility cost test is a measure of the total costs  
13 incurred by Idaho Power to implement a program. The total  
14 resource cost test is a measure of the total resource  
15 expenditures of a program from the point of view of Idaho  
16 Power and its customers as a whole. That is, the total  
17 resource cost test includes the costs incurred by Idaho  
18 Power to operate a program and any additional costs that  
19 customers incur as a result of their participation in a  
20 program. Further detail on the Company's cost-effectiveness  
21 criteria is included in Exhibit No. 2, pages 63 through 65.

22 Q. Has the Company explored potential renewable  
23 energy program design options?

24 A. Yes. The Company is exploring the economics  
25 of providing financial incentives to customers who install

1 small-scale photovoltaic systems to supplement their own  
2 usage. Early analyses have shown that there is potential for  
3 an incentive-based photovoltaic program that would be cost-  
4 effective from the utility cost perspective. However, due to  
5 the relatively high installation cost, photovoltaic system  
6 installation is not likely to be cost-effective from a total  
7 resource cost perspective.

8 Q. Is the Company in favor of using Rider funds  
9 to support customer-installed renewable energy options that  
10 are not cost-effective from a total resource cost  
11 perspective?

12 A. Yes. The Company is in favor of using Rider  
13 funds to provide financial incentives to customers who  
14 install photovoltaic systems to supplement their own energy  
15 usage provided the program is shown to be cost-effective  
16 from the utility cost perspective. That is, Idaho Power  
17 favors the use of Rider funds to support such an endeavor as  
18 long as the financial impact to the Rider is at or below the  
19 cost of the next best resource alternative.

20 Q. Are you proposing that the Commission  
21 authorize the use of Rider funds to support renewable energy  
22 programs that are determined to be cost-effective solely  
23 from the utility cost perspective?

24 A. Yes.

25 Q. Do you propose to change the manner in which

1 the Rider funds are collected from the various customer  
2 classes?

3 A. No. Other than the removal of the funding  
4 caps for residential and irrigation customers, I propose  
5 that each customer pay an amount that is equal to 2.5  
6 percent of base revenue beginning June 1, 2008. This charge  
7 would be applied to all bills for retail sales delivered to  
8 Idaho customers via the Company's distribution system.

9 Q. Do you propose any changes to the terms used  
10 to describe the Rider charge as it appears on customers'  
11 monthly bills?

12 A. Yes. On August 10, 2004, the Commission in  
13 Order No. 29558 established Case No. IPC- E-04-15 for an  
14 investigation of financial disincentives to investment in  
15 energy efficiency by the Company. On January 27, 2006, Idaho  
16 Power filed an Application in Case No. IPC-E-04-15  
17 requesting authority to implement a rate adjustment  
18 mechanism that would adjust the Company rates upward or  
19 downward to recover the Company's fixed costs independent  
20 from the volume of energy sales. The true-up mechanism,  
21 entitled "Fixed-Cost Adjustment" (FCA) would be applicable  
22 only to Residential Service (Schedule 1, Schedule 4 and  
23 Schedule 5) and Small General Service (Schedule 7)  
24 customers.

25 On March 12, 2007, the Commission issued Order No.

1 30267 approving a settlement stipulation agreed to by the  
2 parties to Case No. IPC-E-04-15. In the stipulation, the  
3 parties agreed that it would be in the public interest for  
4 the Company to implement, as a three-year pilot program, the  
5 FCA mechanism proposed by the Company. As part of the  
6 stipulation the Company agreed to combine the Commission-  
7 approved FCA adjustment with the Conservation Program  
8 Funding Charge for purposes of customer bill presentation  
9 and that there would not be a separate line item for the FCA  
10 on customers billing statements. Since the Conservation  
11 Program Funding Charge line item on customers' bills will  
12 now include both Rider-related charges and the FCA, the  
13 Company plans to rename the line item "Energy Efficiency  
14 Services" for the purposes of bill presentation. The new  
15 name will be more reflective of the overall category of  
16 charges and/or credits that are included in that line item  
17 amount.

18 Q. Does this conclude your testimony?

19 A. Yes, it does.

**BEFORE THE**  
**IDAHO PUBLIC UTILITIES COMMISSION**

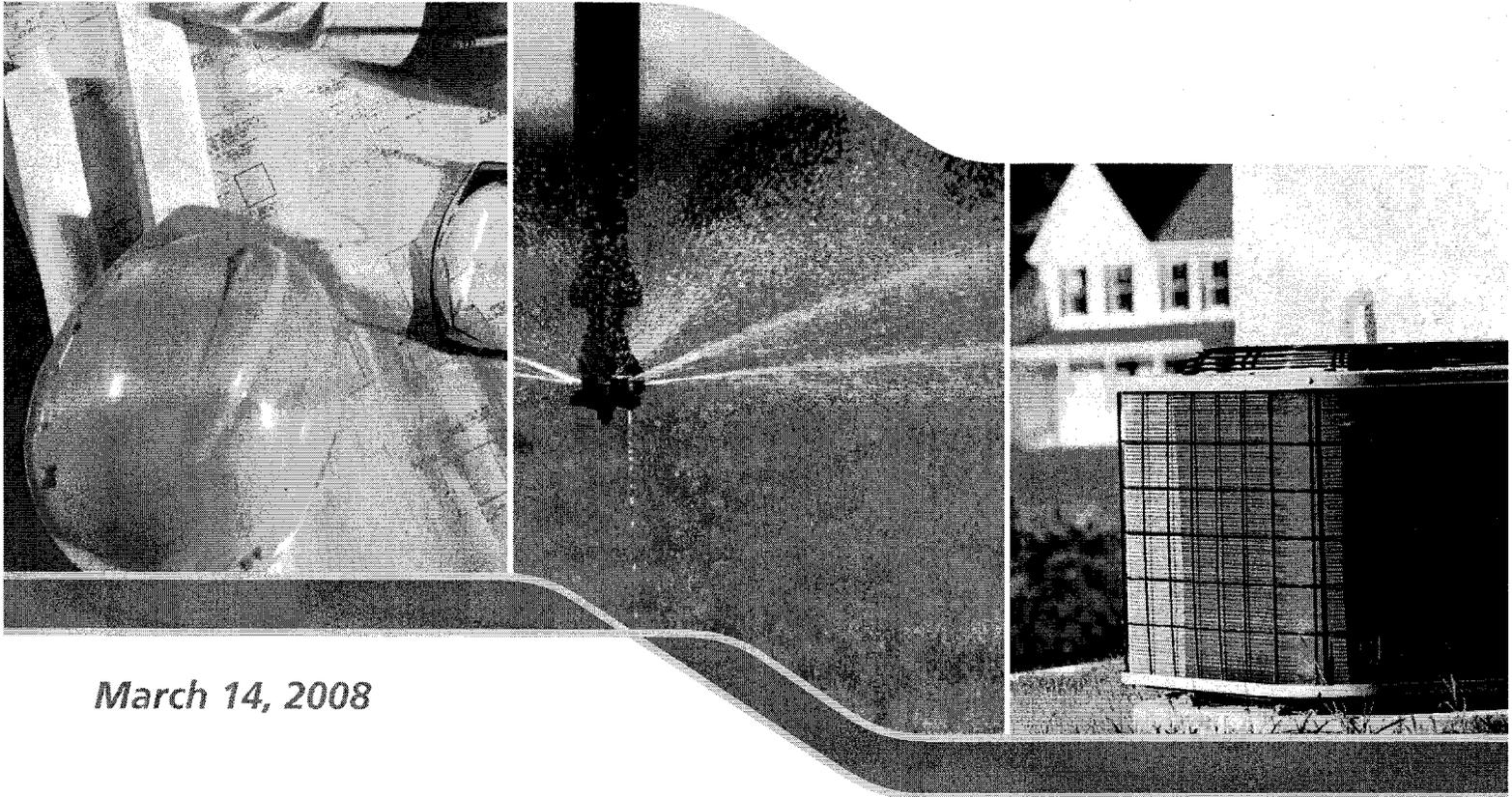
**CASE NO. IPC-E-08-03**

**IDAHO POWER COMPANY**

**EXHIBIT NO. 1**

**TIM TATUM**

## *Demand-Side Management 2007 Annual Report*



*March 14, 2008*

2007

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## GLOSSARY OF TERMS

aMW—Average Megawatt  
akW—Average Kilowatt  
A/C—Air Conditioning  
ASHRAE—American Society of Heating, Refrigerating, and Air-Conditioning Engineers  
BCA—Building Contractors Association  
BEEP—Building Owners and Managers Association’s Energy Efficiency Program  
BETC—Business Energy Tax Credit  
BLC—Basic Load Capacity  
BOC—Boise Operations Center  
BOMA—Building Owners and Managers Association  
BPA—Bonneville Power Administration  
BSU—Boise State University  
CAC—Central Air Conditioning/Conditioners  
CAP—Community Action Partnership  
CAPAI—Community Action Partnership Association of Idaho, Inc.  
CCOA—Canyon County Organization on Aging and Community Services  
CCNO—Community Connection of Northeast Oregon, Inc.  
CFL—Compact Fluorescent Lighting  
CHQ—Corporate Headquarters (Idaho Power Company)  
CRC—Conservation Rate Credit  
DOE—U.S. Department of Energy  
DSM—Demand-Side Management  
DSR—Delivery Service Representatives  
EEAG—Energy Efficiency Advisory Group  
El-Ada—El-Ada Community Action Partnership  
EEBA—Energy and Environmental Building Association  
EICAP—Eastern Idaho Community Action Partnership  
Energy Plan—Also known as Integrated Resource Plan  
ETO—Energy Trust of Oregon  
FCA—Fixed-Cost Adjustment  
H&CE—Heating and Cooling Efficiency Program  
HCSCS—Harney County Senior and Community Services Center  
HMCAA—Harney–Malheur Community Action Agency

HVAC—Heating, Ventilation, and Air Conditioning  
HVR—Home Voltage Regulator  
IEA—Industrial Efficiency Alliance  
IECC—International Energy Conservation Code  
IESBP—Idaho ENERGY STAR® Builders Partnership  
IPC—Idaho Power Company  
IPUC—Idaho Public Utilities Commission  
IRP—Integrated Resource Plan (or Energy Plan)  
kvar—Kilovolt ampere reactive  
kW—Kilowatt  
kWh—Kilowatt-hour  
LED—Light-Emitting Diode  
LEED—Leadership in Energy and Environmental Design  
LEEF—Local Energy Efficiency Funds  
LDL—Lighting Design Lab  
MCOA—Malheur Council on Aging  
MW—Megawatt  
MWh—Megawatt-hour  
NEEM—Northwest Energy Efficient Manufactured Housing Program  
NEEA—Northwest Energy Efficiency Alliance  
NWPCC—Northwest Power and Conservation Council  
OER—Office of Energy Resources (formerly the Idaho Energy Division)  
ODOE—Oregon Department of Energy  
OPUC—Public Utility Commission of Oregon  
PECI—Portland Energy Conservation, Inc.  
PLC—Power Line Carrier  
PTCS—Performance Tested Comfort System  
RFP—Request for Proposal  
RTF—Regional Technical Forum  
Rider—Idaho Energy Efficiency Rider and Oregon Energy Efficiency Rider  
SCCAP—South Central Community Action Partnership  
SEER—Seasonal Energy Efficiency Ratio  
SEICAA—Southeastern Idaho Community Action Agency  
SWAT—Savings With A Twist

USB—Utility Sounding Board

V—Volt

WAQC—Weatherization Assistance for Qualified Customers



## PREFACE

Idaho Power Company's (IPC) Demand-Side Management (DSM) 2007 Annual Report provides a review of the financial and operational performance of IPC's DSM activities and initiatives for the 2007 calendar year. These programs provide a wide range of opportunities for all customer classes to balance their energy needs with best practice energy usage to minimize consumption.

During 2007, IPC continued to expand the programs that began with the 2004 Integrated Resource Plan (IRP), also known as the Energy Plan. IPC's 2006 Energy Plan included the addition of three new DSM programs and the expansion of one program. In addition to the DSM programs identified in the Energy Plan, IPC has also continued to pursue other customer-focused DSM initiatives, including programs that preceded the 2004 Energy Plan, educational opportunities, and regional market transformation efforts. Also in 2007, as part of new regulatory initiatives, IPC committed to enhance its efforts towards promoting energy efficiency.

IPC's DSM activities throughout 2007 focused primarily on enhanced program participation and energy savings in the current programs, and design and implementation of new programs. IPC also continued to further integrate IPC field and support personnel to better facilitate the building of customer awareness and participation in the programs.

This DSM Annual Report is prepared to report on IPC's DSM activities and finances throughout 2007, to express IPC's future plans for DSM activities, and to conform to the Idaho Public Utilities Commission's (IPUC) Order No. 29419 and the Public Utility Commission of Oregon's (OPUC) Order No. 89-507.



## EXECUTIVE SUMMARY

Idaho Power Company (IPC) considers energy efficiency to be an important and necessary part of a balanced approach to meeting the growing demand for electricity. Consistent with this view, energy efficiency is one of the cornerstones supporting IPC's resource acquisition strategy. Energy efficiency is recognized by IPC and its customers as providing economic, operational, and environmental benefits. Therefore, the pursuit of all cost-effective demand-side resources is a primary objective for IPC.

In 2007, the energy savings from IPC's DSM activities increased by 29% and the expenditures on DSM-related activities increased by 36%, compared to 2006. This increase in spending included existing programs and the development of new programs that will result in savings in the future. DSM activities throughout 2007 were focused predominantly on increasing program participation, customer education, and the planning and implementation of the new programs. IPC completed its third full year of implementation of programs identified in the 2004 Energy Plan. It was also the second year of

program implementation of the DSM resources identified in the 2006 Energy Plan.

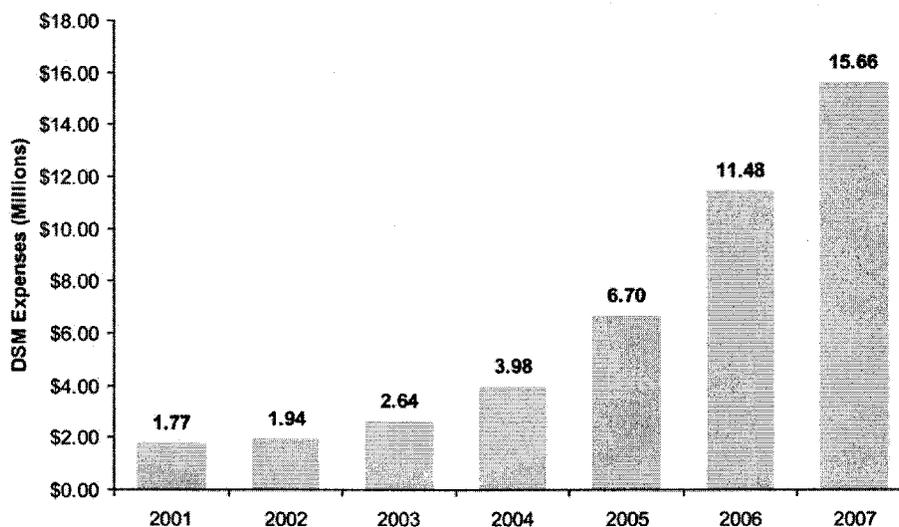
Figures 1 and 2 show the historical growth in expenditures and resource acquisition from 2001 to the present.

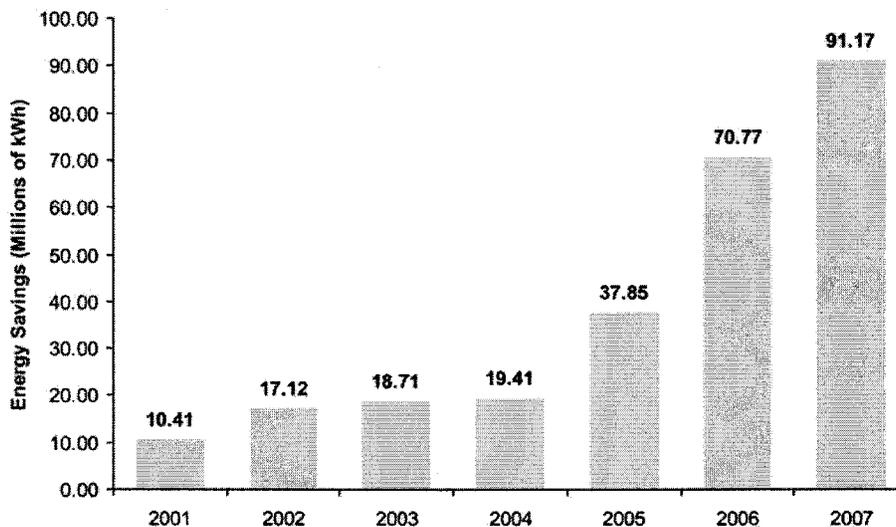
IPC's two main objectives for DSM programs are to 1) acquire cost-effective resources in order to more efficiently meet the electrical system's needs, and 2) provide IPC's customers with programs and information to help them manage their energy and demand use and lower their bills.

IPC achieves these objectives through the development and implementation of programs with specific energy, economic, and customer satisfaction objectives. When possible, IPC implements identical programs in its Idaho and Oregon service areas.

IPC relies on input from the Energy Efficiency Advisory Group (EEAG) to provide customer and public interest review of DSM programs. In addition to the EEAG, IPC solicits further customer input through stakeholder groups in

**Figure 1. DSM Annual Expense History 2001–2007**



**Figure 2.** DSM Annual Energy Savings 2001–2007

the residential, irrigation, commercial, and industrial customer sectors. IPC also has enhanced relationships with trade allies, trade organizations, and regional groups committed to increasing the use of energy efficiency programs and measures to reduce electricity load.

During 2007, IPC continued its contractual participation in, and funding of, the Northwest Energy Efficiency Alliance (NEEA). NEEA's efforts in the Northwest impact IPC's customers by providing behind-the-scenes regional market changes, as well as structural support, to transform IPC's local markets.

In March 2007, the Bonneville Power Administration's (BPA) Conservation Rate Credit (CRC) program was suspended. IPC continued to operate the programs formerly funded with CRC funds, including Energy House Calls and Rebate Advantage, utilizing Energy Efficiency Rider (Rider) funding.

## DSM Program Portfolio Structure

The programs within the DSM portfolio are offered to each of the four major customer sectors: residential, commercial, industrial, and

irrigation. In 2007, the commercial and industrial energy efficiency programs were made available to customers in either sector, expanding the availability of these programs. Because of this change, the sector is now often referred to as the commercial/industrial sector. Programs are categorized by the operational method through which the savings are realized: Demand Response, Energy Efficiency, Market Transformation, and Other Programs and Activities. A brief description of each of these operational categories follows.

### ***Demand Response Programs***

Demand Response programs are designed to reduce participant electricity loads at specific times of the day and year when electricity is normally in short supply and the cost to supply electricity is high. The goal of Demand Response programs within IPC's DSM portfolio is to reduce the system summer peak demand, thus minimizing the need for acquiring higher cost, supply side alternatives, such as gas turbine generation or open market electricity purchases. Demand Response is usually achieved through the use of load control devices installed on customer equipment. The measure of program performance is the number of kilowatts (kW) of reduced demand during peak

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periods. IPC currently offers two Demand Response programs: one offered to residential customers and one offered to irrigation customers.

### **Energy Efficiency Programs**

Energy Efficiency programs focus on reducing energy usage through identifying buildings, equipment, or components where energy efficient design, replacement, or repair can yield significant energy savings. These programs are applicable to all customer sectors. Typical project measures range from entire building construction to simple light bulb replacement. Savings from these programs are measured in terms of reduced kilowatt-hour (kWh) usage, or megawatt-hour (MWh) usage for larger projects. These programs usually supply energy benefits throughout the year. IPC's Energy Efficiency offerings include programs in residential and commercial new construction, residential and commercial retrofit applications, and irrigation and industrial systems improvement or replacement.

### **Market Transformation**

Market Transformation is a method of achieving energy savings through engaging and influencing large national and regional organizations. These organizations are in a position to impact the design of energy usage in products, services, and methods that affect electrical power consumption. IPC primarily achieves Market Transformation savings through its participation in NEEA.

Market transformation can also be accomplished by appliance or building code modifications or enforcement. In 2007, with IPC support, the State of Idaho adopted the International Energy Conservation Code (IECC) 2006 building codes for both residential and commercial building. Also in 2007, IPC conducted an appliance standards study to analyze the energy consumption impact if Idaho were to adopt the appliance standards currently in effect in Oregon.

### **Other Programs and Activities**

Other Programs and Activities represents a wide range of small projects that are typically research- and development-oriented. This category includes the Local Energy Efficiency Funds (LEEF), formerly called the Small Projects and Education Fund, the Residential Energy Efficiency Education Initiative, and the Commercial Educational Initiative. These programs enable IPC to offer support for projects and educational opportunities not normally covered under existing programs.

Table 1 provides a summary of the DSM programs and their respective sectors, as well as operational category and the state in which each was available in 2007.

### **Program Performance**

DSM programs at IPC continue to grow in participation and energy impact in the form of energy savings and demand reduction. In 2007, participation in the A/C Cool Credit program increased by 155%. The Irrigation Peak Rewards and A/C Cool Credit programs combined resulted in estimated summer peak reduction of 48 MW, which represented a 29% increase over 2006 results. The four Energy Efficiency programs that were identified in the 2004 Energy Plan were the Industrial Efficiency (Custom Efficiency), Building Efficiency, ENERGY STAR<sup>®</sup> Homes Northwest, and Irrigation Efficiency Rewards programs. These programs resulted in total annual savings of 45,540 MWh in 2007, which was a 20% increase over the 2006 energy savings of 37,814 MWh for these programs.

The Energy Efficiency programs that originated as a result of the 2006 Energy Plan were the Heating and Cooling Efficiency, ENERGY STAR<sup>®</sup> Lighting, and the Easy Upgrades programs. These programs resulted in annual savings of 12,393 MWh in 2007.

**Table 1.** 2007 DSM Programs, Sectors, and Operational Type

Program	Sector	Operational Type	State
A/C Cool Credit .....	Residential	Demand Response	ID
Building Efficiency Program.....	Commercial/Industrial	Energy Efficiency	ID/OR
Commercial Education Initiative .....	Commercial	Other Programs and Activities	ID/OR
Custom Efficiency.....	Commercial/Industrial	Energy Efficiency	ID/OR
Easy Upgrades.....	Commercial/Industrial	Energy Efficiency	ID/OR
Energy House Calls.....	Residential	Energy Efficiency	ID/OR
ENERGY STAR® Homes Northwest .....	Residential	Energy Efficiency	ID/OR
ENERGY STAR® Lighting .....	Residential	Energy Efficiency	ID/OR
Heating and Cooling Efficiency.....	Residential	Energy Efficiency	ID
Irrigation Efficiency Rewards.....	Irrigation	Energy Efficiency	ID/OR
Irrigation Peak Rewards .....	Irrigation	Demand Response	ID/OR
Local Energy Efficiency Funds .....	All	Other Programs and Activities	ID
NEEA .....	All	Market Transformation	ID/OR
Oregon Commercial Audits .....	Commercial	Energy Efficiency	OR
Oregon Residential Weatherization.....	Residential	Energy Efficiency	OR
Rebate Advantage.....	Residential	Energy Efficiency	ID/OR
Residential Energy Efficiency Education Initiative .....	Residential	Other Programs and Activities	ID/OR
Weatherization Assistance for Qualified Customers.....	Residential	Energy Efficiency	ID/OR

An expansion of the program formerly known as the Industrial Efficiency program was also identified in the 2006 Energy Plan and, as a result, the program was expanded in 2007 and is now called the Custom Efficiency program.

In addition to the Energy Plan programs offered during 2007, IPC operated several other energy efficiency programs targeting residential customers: Weatherization Assistance for Qualified Customers (WAQC), Energy House Calls, Rebate Advantage, and Oregon Residential Weatherization. These energy efficiency programs added annual savings of 4,602 MWh in 2007.

Additional significant energy savings continue to be realized through market transformation partnership activities with NEEA. NEEA estimated that 28,601 MWh were saved in IPC's service area during 2007.

Table 2 shows the 2007 annual energy savings, summer peak demand reduction, and average

megawatt (aMW) savings associated with each of the DSM program categories. Unless otherwise noted, all energy savings presented in this report are measured or estimated at the customer's meter, excluding line losses.

**Table 2.** 2007 DSM Energy Impact

	MWh	Peak MW
Demand Response .....		48
Energy Efficiency .....	62,535	9
Market Transformation .....	28,601	
Other Programs and Activities.....	9	
<b>Total 2007</b>	<b>91,145</b>	<b>57</b>

Table 3 provides a comparison of the 2007 contribution of each sector in terms of weather adjusted energy usage and its respective size in number of customers.

**Table 3.** 2007 Sector Comparison

	Normalized MWh	% of Energy Usage	Average Number of Customers
Residential .....	5,109,692	36%	397,286
Commercial .....	3,897,540	28%	61,640
Industrial.....	3,450,318	24%	126
Irrigation .....	1,693,785	12%	16,665
<b>Total</b>	<b>14,151,334</b>	<b>100%</b>	<b>475,717</b>

Please note that energy, demand, and expense data have been rounded to the nearest whole unit, which may result in minor rounding differences.

## Regulatory Initiatives

IPC has aligned itself with the IPUC and the members of the environmental community to work toward creating a financial and regulatory environment supportive of utility DSM resource acquisition. Resulting from this collaborative effort are two financial mechanisms designed to: 1) remove the financial disincentives to utility DSM resource acquisition; and 2) provide a financial incentive to shareowners when DSM programs perform above baseline goals. IPC is optimistic that this effort will lead to a sustained environment supportive of its plans to pursue all cost-effective DSM opportunities while balancing its shareowner's financial objectives.

In response to these regulatory mechanisms, IPC has committed to enhancing its efforts toward promoting DSM and energy efficiency in several key areas, including a broad availability of efficiency and load management programs, building code improvement activity, pursuit of appliance code standards, expansion of DSM programs beyond peak shaving/load shifting programs, and third-party verification.

## DSM Expenditures and Funding

Funding for DSM programs in 2007 came from several sources. The Idaho Energy Efficiency

Rider and Oregon Energy Efficiency Rider funds are collected directly from customers on their monthly bills at a rate of 1.5% of base rate revenues, with monthly caps on residential and irrigation customer contributions. IPC also received funds from the BPA, which until March 2007 were provided through BPA's CRC program. DSM-related expenses not funded through the Rider or BPA funds, including costs for administration and overhead, are included as part of IPC's ongoing operation and maintenance costs. Total DSM expenses funded from these sources were slightly under \$16 million in 2007.

Table 4 provides a summary of the 2007 expenses and energy savings by each funding category.

**Table 4.** 2007 DSM Expenses and Energy Impact

	Expenses	MWh Savings
Idaho Rider Funded .....	\$13,487,460	81,883
Oregon Rider Funded ....	\$409,188	4,364
BPA Funded.....	\$200,686	1,560
IPC Funded.....	\$1,565,043	3,338
<b>Total 2007</b>	<b>\$15,662,378</b>	<b>91,145</b>

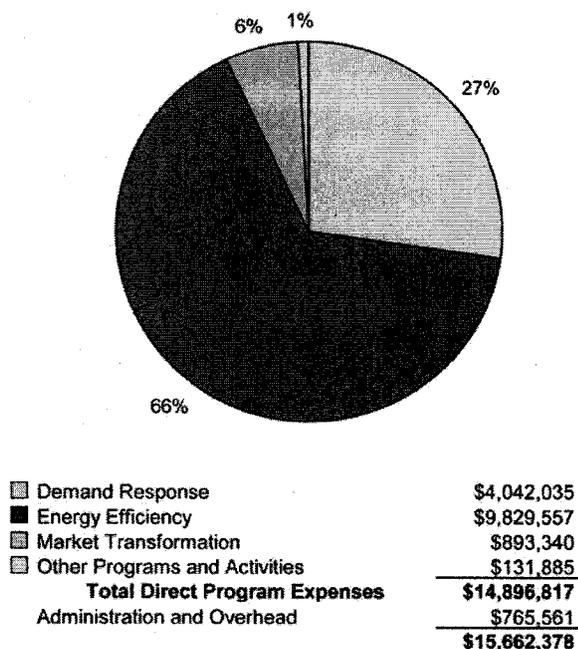
Figure 3 shows the relationships among the 2007 DSM program expenditures by operational category. Direct program expenses include customer incentives and other program-specific costs. Administrative and overhead costs are non-direct program expenses or costs not directly attributable to a specific program.

## Future Plans

Many of IPC's DSM programs are selected for implementation through its biennial Energy Plan. The Energy Plan is a public document that details IPC's strategy for economically maintaining the adequacy of its power system into the future. The Energy Plan process balances risk, environmental, economic, and other considerations in developing a preferred portfolio of future resources that meet the specific energy needs of IPC and its customers.

The Energy Plan is normally updated every two years to reflect changes in supply costs, demand for electricity, and other factors; however, the next full Energy Plan is scheduled to be completed in June of 2009. An update to the 2006 plan will be complete in June of 2008. IPC DSM staff will be part of the collaborative team compiling both the 2006 Energy Plan Update and the 2009 Energy Plan.

**Figure 3.** 2007 Direct Program Expense



In 2008, IPC plans to continue to increase participation and energy savings from existing programs, continue to implement new energy efficiency programs, research possible new demand response programs, complete a new DSM potential study, and evaluate several existing programs. IPC will participate in the development of the Northwest Power and Conservation Council's (NWPCC) Sixth Power Plan, continue and enhance consumer education on energy efficiency, and complete various research and development projects.

### Customer Satisfaction

Customer satisfaction is a key consideration in IPC's program design, operations, and

management. IPC utilizes surveys, focus groups, stakeholder input, and input from the EEAG and IPC field personnel. This information and input is used during the design and modification phases of program development and throughout each program's life.

The Easy Upgrade program provides an ongoing, Web-based customer survey for its participants. The results of these surveys indicate a general satisfaction with this program and helps guide marketing efforts.

In early 2007, the WAQC program began receiving satisfaction surveys from participating customers. The results of this survey showed that customers thought this program helped them save energy, money, and educated them on energy savings ideas.

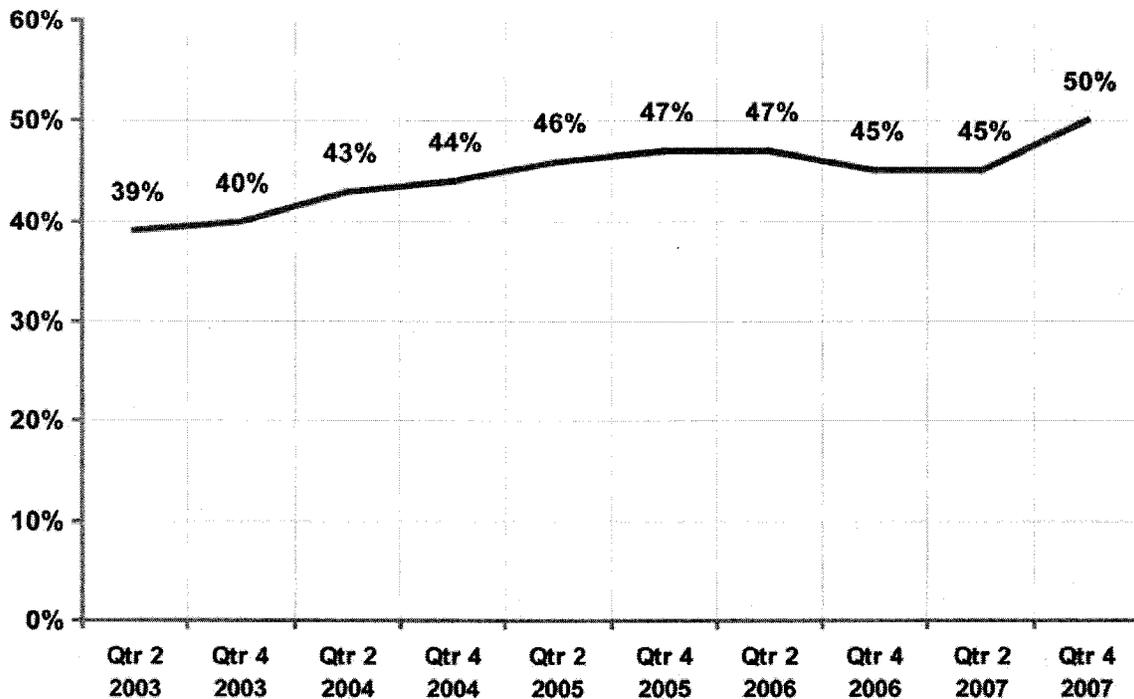
An important measure of customer satisfaction is the retention rate of ongoing programs. The Irrigation Peak Rewards program has consistent participation in the number of customers and the number of service points since the program's inception three years ago in 2005. During 2007, the A/C Cool Credit program experienced high customer retention, indicated through the low program attrition rate of less than 1%, due to factors other than customer relocation.

Results of IPC's quarterly Customer Satisfaction Survey have shown steady improvement over recent years as the percent of customers who have a positive perception of IPC's energy conservation efforts has continued to increase. Customers' positive perception of IPC's conservation efforts increased from 39% in early 2003 to 50% in late 2007, which is an 11 percentage point increase. This represents a 28% increase in positive customer perception. IPC continues to expand its customer satisfaction measurement activities to identify actionable areas of improvement.

Figure 4 depicts biannual growth in the number of customers who indicated IPC met or

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**Figure 4. Customer Perception of IPC's Conservation Efforts**



exceeded their needs in regard to energy conservation efforts encouraged by IPC.

including the Fixed-Cost Adjustment and Performance-Based Incentive pilots.

Several programs, including A/C Cool Credit, Energy House Calls, Rebate Advantage, and Building Efficiency, were developing customer surveys late in 2007. These surveys will be implemented in 2008. Survey results will measure customer satisfaction and provide guidance when future modifications to programs are considered.

**DSM Annual Report Structure**

The structure of the first section of this report is based on customer sectors (categorized by residential, commercial/industrial, and irrigation). The write-up for each sector contains information about the specific programs unique to that sector. Following the sector write-ups are descriptions of IPC's activities in Market Transformation, Other Programs and Activities, and IPC's recent Regulatory Initiatives,

## RESIDENTIAL SECTOR OVERVIEW

Residential customers represent IPC's largest customer segment with over 400,000 accounts at the end of 2007, serving approximately one million people. Growth within this segment slowed slightly in 2007 compared to recent years. The number of residential customers in 2007 grew by approximately 2%, adding more than 7,000 customers. The residential sector represents approximately 36% of total system energy sales.

### Programs

Programs available to residential customers include one demand response program, seven energy efficiency programs, and an educational initiative program. The demand response offering is the A/C Cool Credit program, which achieves peak demand reduction by cycling customers' central air conditioners. The residential energy efficiency programs include Energy House Calls, ENERGY STAR® Homes Northwest, Oregon Residential Weatherization, Rebate Advantage, ENERGY STAR® Lighting, WAQC, and Heating and Cooling Efficiency.

New in 2007 was the Residential Energy Efficiency Education Initiative, which provided educational outreach to IPC residential customers. Additionally, new programs under development in 2007 were the Heating and Cooling Efficiency program and the Appliance program.

IPC conducted approximately 20 regional events in partnership with local community retailers to educate and influence consumer purchasing decisions relating to ENERGY STAR® Lighting. IPC increased residential program outreach efforts in 2007 through partnerships with Home Depot, Lowes, Wal-Mart, and other retailers. These partnerships were developed to educate customers across IPC's service area about

energy efficient lighting and increase the adoption of energy efficient lighting by residential customers.

Another addition in 2007 was the creation of the [www.getpluggedin.com](http://www.getpluggedin.com) Web site and related radio and TV advertising. These marketing channels were designed to educate customers about various issues facing IPC, and specifically, energy efficiency and the role it plays in planning and managing growth.

### Results

In 2007, the residential sector was responsible for a 10% increase in energy savings from 2006 with 11,293,798 kWh savings in 2006 and 12,440,682 kWh in 2007. The peak demand savings from this sector increased by 74% from 6.5 MW in 2006 to 11.4 MW in 2007. Customer participation in the demand response programs increased by 155% for 2007, and compact fluorescent light (CFL) bulb sales increased by 23%.

Table 5 summarizes the residential sector's expenses and energy savings for 2007. Table 6 shows the residential sector demand reduction.

**Table 5. Residential Sector Direct Expenses and Ranked Energy Savings**

Residential Sector Programs	Expenses		Energy Savings	
	2007 Direct Expenses	% of 2007 Expenses	2007 Energy Savings (kWh)	% of 2007 Energy Savings
ENERGY STAR® Lighting.....	\$557,646	14.5%	7,207,439	57.8%
WAQC—ID .....	\$1,292,930	39.4%	3,296,019	26.4%
Energy House Calls .....	\$336,372	10.2%	699,899	5.6%
ENERGY STAR® Homes Northwest.....	\$475,044	17.0%	629,634	5.3%
Rebate Advantage .....	\$89,269	2.7%	554,018	4.4%
WAQC—OR .....	\$30,694	0.9%	42,108	<1.0%
Oregon Weatherization .....	\$3,781	0.1%	9,971	<1.0%
Heating and Cooling Efficiency .....	\$488,211	14.9%	1,595	<1.0%
Appliance Program .....	\$9,275	0.3%	0	<1.0%
<b>Total</b>	<b>\$3,283,222</b>	<b>100.0%</b>	<b>12,440,682</b>	<b>100.0%</b>

**Table 6. 2007 Residential Sector Demand Reduction (kW)**

	akW	Summer Peak kW
A/C Cool Credit .....	—	10,762
Appliance Program.....	—	—
Energy House Calls.....	80	—
ENERGY STAR® Homes Northwest.....	76	606
ENERGY STAR® Lighting .....	823	—
Heating and Cooling Efficiency .....	—	—
Oregon Residential Weatherization .....	1	—
Rebate Advantage.....	63	—
WAQC—ID.....	376	—
WAQC—OR.....	5	—
<b>Total</b>	<b>1,425</b>	<b>11,368</b>

## Residential Sector Demand Response Program

### A/C Cool Credit

#### Program Overview

Target Customers.....	Residential users of central air conditioning units in qualifying areas
Program Life .....	2003–Ongoing

#### Summary 2007

Participation .....	13,692 customers
Total Utility Costs .....	\$2,426,154
Funding Sources	
Idaho Rider .....	\$2,421,461
Oregon Rider.....	\$0
BPA.....	\$0
IPC.....	\$4,692
Savings in kWh .....	N/A
Peak Savings in kW ...	10,762 (summer peak)

### Description

A/C Cool Credit is a voluntary program for residential customers. Originally developed as a pilot program in 2003 and 2004, the program was selected in the 2004 Energy Plan for implementation in 2005. The program, through the use of communications hardware and software, enables IPC to cycle participants' central air conditioners on and off via a direct load-control device installed on the air conditioning unit. Participants receive a monthly, monetary incentive for participating in the program during the summer season. This program enables IPC to directly reduce system peaking requirements during times when summer system demand is high. In 2007, the program was available in Ada County, Canyon County, and the Emmett valley.

Cycling of air conditioning units is achieved through the use of either individual radio-controlled or power line carrier (PLC) switches installed on customer air conditioning equipment. These switches cycle customer air conditioners using a schedule initiated on the day before, or the day of, a cycling event. Under

this program, IPC may cycle participants' air conditioners for up to 40 hours each month for the months of June, July, and August.

In 2007, marketing efforts were significantly increased in both the quantity and frequency of mailings. A number of improvements in developing target lists, updating program materials, and tracking campaigns were made over the course of the year. Response rates ranged from less than 1% to over 6%, depending on the time of year and the area. Spring and early summer saw the highest response rates. There were also higher response rates in Eagle and North Boise.

An important activity in 2007 was building relationships with the heating, ventilation, and air conditioning (HVAC) community. IPC staff attended the Idaho State HVAC Association monthly meetings and several meetings with individual HVAC companies. This has been beneficial in creating an educated awareness of the program and minimizing the amount of unauthorized switch disconnects.

Two mitigation projects occurred prior to the start of the cycling season. The first incident that required mitigation involved an installer whose work did not match what was reported. A plan to correct the problem was put in place when it was discovered. Quality checks were completed on all service calls completed by the installer. The vendor responsible increased resources to prevent interference with normal production plans. In total, 2,786 sites were visited.

The second incident involved a radio signal intended for a limited number of switches that was accidentally received by all the switches, causing some to become inactive. The basis of the problem was determined, and a plan was put into place to correct the issue and prevent it from happening in the future. Each switch required a physical visit to reset and download information. This involved servicing over 7,000 switches.

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Due to the above issues, many switches were not operable for cycling at the start of June. In both cases, the vendors mitigated the problems.

The unintended benefit of checking nearly all of the radio-controlled switches was that verification of these units was completed in a comprehensive way in a very short period of time.

## **Results**

### **Participation**

Program participants increased from 5,369 in 2006 to 13,692 by the end of 2007. This total included 236 participating customers in the Emmett valley using the PLC system.

Installations occurred year-round in 2007, a result of the ongoing, direct-mail campaigns. As expected, enrollments and installations were lower during the non-summer months.

As enrollments declined due to the end of summer and the start of cooler weather, an alternative marketing effort was implemented. A marketing door hanger was placed at approximately ten (10) homes near each new A/C Cool Credit installation, resulting in an increase of 1.6% new sign-ups for the program.

### **Demand Impact**

The estimated demand reduction in July 2007 was 10.8 MW, a substantial increase over 5.6 MW achieved in 2006. Cumulative savings for customers enrolled by year-end are expected to provide an estimated 15 MW. Although cycling appears to shift some usage from cycling hours to non-cycling hours, the net effect on kWh usage is negligible. IPC initiated 19 load-control events between June 20 and August 30, 2007. The majority of control events were four hours in duration at a 50% cycling rate. However, when the temperature was forecasted to be 100 degrees or more, IPC cycled at a 33% rate to minimize customer discomfort and reduce potential participant attrition.

## **2008 Strategies**

The 2008 A/C Cool Credit target is 16,000 new participants. Since the target for 2007 was approximately 12,000 new participants and there were approximately 8,300 new participants last year, this results in the need to carry over the shortage of approximately 5,000 participants into the 2008 sign-up target.

IPC will continue to manage and monitor the performance of the installation contractors to ensure that customer satisfaction with the program remains high as the number of installations increases. As IPC increases its marketing efforts in 2008, additional trained installers will be used to support the increased participation targets.

**Residential Sector  
Energy Efficiency Program**

## Energy House Calls

### Program Overview

Target Customers.....	Occupants of manufactured homes
Program Life.....	2002–Ongoing

### Summary 2007

Participation.....	700 homes
Total Utility Costs.....	\$336,372
Funding Sources	
Idaho Rider.....	\$251,743
Oregon Rider.....	\$3,349
BPA.....	\$80,830
IPC.....	\$450
Savings in kWh.....	699,899
Peak Savings in kW.....	N/A

### Description

Originally launched as a pilot in 2002, the Energy House Calls program provides duct sealing and additional efficiency measures to IPC customers living in manufactured homes. Due to the suspension of BPA funding in 2007, this program was funded by the BPA the first half of 2007 and by Rider funds the remainder of the year.

Funds cover the participants' costs and include the following services and products: duct testing and sealing according to Performance Tested Comfort System (PTCS) specifications endorsed by the BPA, installation of five CFL bulbs, provision of two furnace filters along with replacement instructions, water heater temperature test for proper setting, and distribution of energy efficiency educational materials for manufactured home occupants.

Program management is under contract with Ecos Consulting, a company with experience in managing and supplying duct-sealing service programs. This company coordinates providers performing local weatherization and energy

efficiency services. Quality assurance is conducted by third-party audits.

### Results

Significant energy savings were realized during 2007, the fifth full year of operation for this program. The number of CFL bulbs installed in each home increased from three to five, generating even greater energy savings.

### Participation

Participation in this program exceeded projections for 2007. IPC continued to focus on recruiting rural customers and those living in colder climates. This focus represented a shift from the initial program target sector of customers concentrated in communities of manufactured homes. The shift in focus to decentralized, rural manufactured housing units required increased marketing effort and travel time per housing unit.

In the past, new participants were recruited via IPC bill stuffers, *Customer Connection* newsletters, newspaper advertisements, and field contractors. In 2007, IPC utilized a direct-mail program targeted to customers on IPC's customer information system whose house-type data indicated a mobile or manufactured home. An analysis was conducted to further segment this population into potential electrically-heated homes based on energy use during winter months. Response rates to this campaign have been significant, far exceeding prior marketing efforts.

### Energy Impact

The annual energy savings increased by 13% over the previous year, from 333,494 kWh in 2006 to 699,899 kWh in 2007. The primary source of savings from the program came from increasing the customers' efficiency of their heating systems through improving air delivery from furnaces through the duct systems.

Improved delivery through duct systems also

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provided energy savings associated with cooled air where applicable.

The program's furnace filter and water temperature evaluation services educate the occupants on maintaining energy efficient practices in the future. Energy impact of these measures is not quantified or included in the total energy impact of the program.

Table 7 summarizes 2007 program service activity for Idaho and Oregon customers.

**Table 7.** Energy House Calls 2007 Activity and Energy Savings Summary

	Idaho	Oregon	Total
<b>Activity</b>			
Test Only .....	72	10	82
Test and Seal .....	643	24	667
<b>Total Duct Measures</b>	<b>715</b>	<b>34</b>	<b>749</b>
CFL Bulbs.....	3,515	175	3,690
Furnace Filters.....	1,252	63	1,315
<b>Total Other Measures</b>	<b>4,767</b>	<b>238</b>	<b>5,005</b>
Water Temperature (Average).....	128	127	128
<b>Energy Savings kWh.....</b>	<b>674,399</b>	<b>25,500</b>	<b>699,899</b>

## 2008 Strategies

In mid-2007, IPC assessed the market saturation level of this program to determine whether or not to continue Energy House Calls into 2008. IPC identified a significant number of qualified homes in the service area that can benefit from this program. IPC plans to continue the program for the full year in 2008 and focus greater efforts on urban areas.

Another change for 2008 is an improvement in how information is left with customers receiving an Energy House Call. Instead of numerous loose papers, they will now receive a packet of material. The leave-behind information educates customers on services performed and ways they can conserve energy.

**Residential Sector  
Energy Efficiency Program**

**ENERGY STAR® Homes  
Northwest**

**Program Overview**

Target Customers.....	Buyers of new residential homes
Program Life.....	2004–Ongoing

**Summary 2007**

Participation.....	303 homes
Total Utility Costs.....	\$475,044
Funding Sources	
Idaho Rider.....	\$451,775
Oregon Rider.....	\$12,249
BPA.....	\$0
IPC.....	\$11,020
Savings in kWh.....	629,634
Peak Savings in kW.....	606

**Description**

The ENERGY STAR® Homes Northwest program is a regionally coordinated initiative supported by a partnership of IPC, NEEA, and the State of Idaho Office of Energy Resources (OER) to improve energy efficient construction practices for single-family homes.

Selected for implementation in the 2004 Energy Plan, the program’s goal is to encourage the purchase of homes that are 20% more energy efficient than homes built to standard Idaho residential code. This program specifically targets the reduction of peak summer demand. This is accomplished by increasing the efficiency of residential building envelope construction practices, air conditioning equipment, and air delivery.

In 2007, the program offered a \$750 incentive per qualifying home to participating builders and a \$1,000 incentive for Parade of Homes units. Program activities included program management services, coordination of local partnerships between IPC, builders, and real

estate service providers, education and training activities for residential new construction industry partners, and consumer marketing communications conveying the benefits of ENERGY STAR® Homes.

**Results**

In 2007, the number of active ENERGY STAR® builders increased from 119 to 132. However, as a result of the housing downturn in the Treasure Valley, the number of certified ENERGY STAR® Homes in 2007 was 303, down from 439 homes in 2006.

IPC was instrumental in the formation of the Idaho ENERGY STAR® Builders Partnership (IESBP), comprised of builders committed to building exclusively 100% ENERGY STAR® homes. In 2007, IPC co-sponsored a cooperative marketing campaign with IESBP and Northwest ENERGY STAR®. This campaign consisted of print advertising, radio, and a 100% ENERGY STAR® tour of homes.

**Participation**

While builder participation increased, the number of certified homes fell short of the level needed to meet the 2004 Energy Plan energy target of 1,414,166 kWh or 681 homes for 2007. Nearly 90% of the ENERGY STAR® Homes completed were built in the Treasure Valley. The program’s estimated market share in 2007 was approximately 5% of the total single-family housing starts in IPC’s service area, which is a slight increase over 2006.

**Energy Impact**

Annual energy savings in 2007 were 629,634 kWh as compared to 912,242 kWh savings in 2006. The demand reduction in 2007 was 606 kW, and in 2006 it was 878 kW. This decrease in both energy and demand savings can be contributed to the downturn in the housing market.

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## **2008 Strategies**

In 2008, the incentive for builders will change. The 2006 International Energy Conservation Code (IECC), which the State of Idaho has adopted as its standard building code, took effect January 1, 2008. This new code meets ENERGY STAR® Homes Northwest program standards in several key areas, which decreases the incremental energy savings of each ENERGY STAR® Home. As a direct result of the upgrade in Idaho code and the resulting reduction of energy savings, IPC has reduced the incentive to \$400 in 2008, down from the \$750 incentive previously offered. Incentives for Parade of Homes units remain unchanged.

Based on current market conditions, IPC's target for 2008 is to complete 380 certified ENERGY STAR® Northwest Homes. In order to achieve this target IPC plans to increase awareness of the program, especially outside the Treasure Valley. IPC will continue to provide realtor trainings, support Parade of Homes events, support Building Contractors Association (BCA) and realtor associations, improve distribution of marketing materials, and continue to support the IESBP group and their activities.

**Residential Sector  
Energy Efficiency Program**

**Oregon Residential  
Weatherization**

**Program Overview**

Target Customers.....Oregon residential customers  
Program Life.....1982–Ongoing

**Summary 2007**

Responses.....35  
Participation.....22  
Audit Implementation..... 1  
Total Utility Costs.....\$3,781  
Funding Sources  
Idaho Rider.....\$0  
Oregon Rider.....\$0  
BPA.....\$0  
IPC.....\$3,781  
Savings in kWh.....9,971  
Peak Savings in kW.....N/A

Five customer responses were directed to Cascade Natural Gas, and eight follow-up calls to customers had no response.

**Energy Impact**

One of the 2007 audit participants chose to implement energy-saving measures during the year. This customer requested a loan for \$1,808 to pay for ceiling and floor insulation used in the home. Annual energy savings from this program equaled 9,971 kWh.

**Description**

IPC offers free energy audits for electrically heated homes of customers within the Oregon service area. Upon request, an IPC representative visits the home to analyze it for energy efficiency. An estimate of costs and savings for specific measures is given to the customer. IPC offers financial assistance for a portion of the costs for weatherization measures, either as a cash incentive or with a 6.5% interest loan.

**Results**

**Participation**

In 2007, a total of 35 Oregon customers responded to an informational brochure about energy audits and home weatherization financing in 2007. Each of the 35 customers returned a card from the brochure indicating they were interested in a home energy audit, weatherization loan, or cash payment. Twenty-two audits and responses to customer inquiries to the program were completed.

**Residential Sector  
Energy Efficiency Program**

**Rebate Advantage**

**Program Overview**

Target Customers.....	Residential buyers of new manufactured homes
Program Life.....	2003–Ongoing

**Summary 2007**

Participation.....	123 homes
Total Utility Costs.....	\$89,269
Funding Sources	
Idaho Rider.....	\$58,854
Oregon Rider.....	\$4,609
BPA.....	\$25,073
IPC.....	\$733
Savings in kWh.....	554,018
Peak Savings in kW.....	N/A

**Description**

The Rebate Advantage program encourages manufactured home buyers to purchase energy efficient Super Good Cents<sup>®</sup> and later ENERGY STAR<sup>®</sup> manufactured homes. Effective October 1, 2007, IPC began providing incentives only on ENERGY STAR<sup>®</sup>-certified manufactured homes.

Rebate Advantage promotes and educates buyers and retailers of manufactured homes about the benefits of owning energy efficient models, and offers financial incentives. Customers who purchase an ENERGY STAR<sup>®</sup> home and site it in IPC’s service area are eligible for a \$500 incentive. In addition, salespersons receive a \$100 incentive for each qualified home sold.

Quality control and energy efficiency specifications for qualified homes are established by the Northwest Energy Efficient Manufactured Housing (NEEM) program. NEEM is a consortium of manufacturers and state energy offices in the Northwest. In addition to specifications and quality control,

NEEM tracks the production and on-site performance of ENERGY STAR<sup>®</sup> homes.

The license to use the Super Good Cents<sup>®</sup> designation in the Pacific Northwest was discontinued as of September 30, 2006. Initially, BPA funding guidelines directed that, effective October 1, 2006, new homes must be manufactured under ENERGY STAR<sup>®</sup> standards. Subsequent to this decision, BPA and IPC decided to also accept the following homes for credit until September 30, 2007: manufactured homes certified by NEEM as Super Good Cents<sup>®</sup>, and manufactured homes sold as Super Good Cents<sup>®</sup> homes prior to October 1, 2006 that subsequently receive the NEEM-certified designation.

**Results**

**Participation**

In 2007, there were 123 homes sold under this program, compared to 102 homes in 2006. The geographic reach of this program, as seen in Table 8, shows 19% of the total homes participating were in IPC’s Oregon service area. Approximately one-third of all manufactured home dealers with sales in IPC’s service area are participating in the program.

**Table 8.** Rebate Advantage 2007 Activity and Energy Savings Summary

	Idaho	Oregon	Total
<b>Activity</b>			
Homes.....	99	24	123
Towns with Homes Sited.....	48	9	57
Counties with Homes Sited.....	21	3	24
Salespeople <sup>(1)</sup> .....	30	13	N/A
Dealers <sup>(1)</sup> .....	19	9	N/A
Manufacturers <sup>(1)</sup> .....	12	7	N/A
Energy Savings kWh.....	465,882	88,196	554,018

<sup>(1)</sup> Some sales groups sell in both Idaho and Oregon.

## **Energy Impact**

The annual energy savings increased by 66% over the previous year, from 333,494 kWh in 2006 to 554,018 kWh in 2007. Savings from this program are largely due to improvements in the shell of the home, resulting in more efficient use of heating and cooling resources.

Manufacturers have some flexibility in how they achieve a more efficient shell; however, a common attribute of all homes in the program is a sealed-duct delivery system.

## **2008 Strategies**

The 2008 target for this program is 150 certified homes. To accomplish this target, IPC will increase outreach to manufactured home dealers. A new brochure is being developed to assist manufactured home dealers in promoting ENERGY STAR<sup>®</sup> manufactured homes and IPC's Rebate Advantage program to their customers.

**Residential Sector  
Energy Efficiency Program**

**ENERGY STAR® Lighting**

**Program Overview**

Target Customers.....	Residential users of incandescent lighting
Program Life.....	Fall 2005–Ongoing

**Summary 2007**

Participation.....	219,739 CFL bulbs
Total Utility Costs.....	\$557,646
Funding Sources	
Idaho Rider.....	\$519,818
Oregon Rider.....	\$11,787
BPA.....	\$37,131
IPC.....	\$10,446
Savings in kWh.....	7,207,439
Peak Savings in kW.....	N/A

**Description**

The ENERGY STAR® Lighting program is designed to achieve residential energy savings through the replacement of less efficient lighting with more efficient technology. The average older home has 38 light bulbs. New homes have an average of 77 light bulbs. Changing these bulbs represents a low-cost, easy way for all customers to achieve energy savings.

In 2007, the majority of energy savings were achieved through IPC’s participation in three regional Change A Light promotions sponsored by the BPA. Additional energy savings were achieved from carryover from the 2006 Savings With A Twist (SWAT) promotion and limited direct-install opportunities. Table 9 describes the energy savings and the number of CFL bulbs contributed to each segment of the program.

**Table 9. ENERGY STAR® Lighting 2007 Program Summary**

Current Programs	kWh Energy Savings	# of CFL Bulbs
Savings With A Twist <sup>(1)</sup> .....	186,468	5,685
Change A Light Spring .....	3,263,141	99,486
Change A Light Fall Spiral .....	3,420,154	104,273
Change A Light Fall Specialty .....	258,431	7,879
Light Bulb Direct-Install .....	79,245	2,416
<b>Total</b>	<b>7,207,439</b>	<b>219,739</b>

<sup>(1)</sup> 2006 carryover

**Results**

**Energy Impact**

ENERGY STAR® Lighting program activities in Idaho and Oregon resulted in the installation of 219,739 CFLs for a savings of 7,207 MWh as compared to 6,302 MWh in 2006. In 2007, Idaho’s portion included the installation of 213,652 CFLs for a savings of 7,007 MWh, while Oregon’s portion consisted of the installation of 6,087 CFLs and a savings of 200 MWh.

BPA has calculated the energy impact of a CFL at 32.8 kWh/bulb for its CRC program. This is a regional average based on the wattage difference between the incandescent and CFL bulb, adjusted for heating impact, market saturation rates, and hours of operation. Although the BPA–CRC program was suspended mid-year, the Oregon portion of the spring Change a Light program was financed with CRC funds.

**Customer Satisfaction**

In 2007, IPC developed a strategy to address customer concerns recognizing the role of state and federal health and environmental professionals in regard to risks posed by mercury in CFLs. IPC informs customers of the presence of mercury in bulbs and directs them to the primary sources of environmental and health information for specific questions related to disposal, risk, and management.

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Cost continues to be a market barrier with off-promotion CFLs priced at \$2 to over \$6 in the marketplace.

### ***2008 Strategies***

IPC will continue to promote ENERGY STAR® Lighting in 2008 through participation in regional lighting promotions and customer education, while exploring new projects to promote energy efficient lighting.

IPC will provide customer education through in-store events, targeting education efforts on new bulb applications and emerging advances in ENERGY STAR® lighting, including both CFL and light-emitting diode (LED) technologies.

Additionally, IPC will explore new programs for ENERGY STAR® fixtures and ceiling fans, and a light bulb program for smaller, rural retailers.

**Residential Sector  
Energy Efficiency Program**

**Weatherization Assistance  
for Qualified Customers**

**Program Overview**

Target Customers.....	Qualifying residential customers
Program Life.....	1989–Ongoing

**Summary 2007**

Participation.....	408 units
Total Utility Costs.....	\$1,323,624
<b>Funding Sources</b>	
Idaho Rider.....	\$0
Oregon Rider.....	\$0
BPA.....	\$28,035
IPC.....	\$1,295,588
Savings in kWh.....	3,338,126
Peak Savings in kW.....	N/A

**Description**

The WAQC program has been operating since 1989. The program provides funding for the installation of cost-effective weatherization measures in qualified owner-occupied and rental homes that are electrically heated. Enhancements enable low-income families to maintain a comfortable home environment, while saving energy and money otherwise spent on heating, cooling, and lighting.

WAQC is modeled after the U.S. Department of Energy (DOE) Weatherization Program. The DOE program is managed through Health and Human Services offices in Idaho and by the Oregon Housing and Community Services in Oregon.

IPC serves as the administrator of WAQC, in conjunction with Community Action Partnership (CAP) agencies in the IPC service area. Federal funds are allocated to the Idaho Department of Health and Welfare and the Oregon Housing and Community Services, then to CAP agencies based upon U.S. Census data

of qualifying household income within each CAP agency’s geographic area. The CAP agencies oversee local weatherization crews and contractors providing implementations that improve energy efficiency of the homes.

Table 10 provides a summary of WAQC IPC 2007 expenses.

**Table 10. Weatherization Assistance 2007 Year-End IPC Expenses**

	2007	
	Projects	Expenses
<b>IPC Payments</b>		
<b>CAP Agencies<sup>(1)</sup></b>		
CCOA.....	120	\$355,071
EI-Ada.....	159	\$473,288
EICAP.....	6	\$12,788
SCCAP.....	65	\$171,830
SEICAA.....	47	\$111,604
<b>ID Total</b>	<b>397</b>	<b>\$1,124,581</b>
MCOA—OR.....	9	\$23,019
HCSCS—OR.....	0	\$0
CCNO—OR.....	2	\$5,869
<b>OR Total</b>	<b>11</b>	<b>\$28,887</b>
<b>Total CAP Agencies</b>	<b>408</b>	<b>\$1,153,468</b>
<b>Non-Profit Projects</b>		
Non-Profits—ID.....	0	\$75,760
Non-Profits—OR.....	0	\$0
<b>Total Non-Profit</b>	<b>0</b>	<b>\$75,760</b>
<b>Total IPC Payments</b>	<b>408</b>	<b>\$1,229,228</b>
<b>IPC Administration<sup>(2)</sup></b>		<b>\$94,395</b>
<b>Total IPC Program Expense</b>		<b>\$1,323,624</b>

(1) See Glossary for Community Action Partnership (CAP) definitions.

(2) Includes BPA funding of \$28,035 for 2007.

**Results**

**Participation**

During 2007, Idaho CAP agencies weatherized 391 electrically heated homes and six buildings housing nonprofit agencies providing assistance to special-needs customers. Oregon CAP agencies weatherized 11 homes. In 2007, the

WAQC program completed a total of 408 weatherization jobs.

### Energy Impact

The annual energy savings increased by 13% over the prior year, to 3,338,126 kWh in 2007 as compared to 2,958,024 kWh savings in 2006. Table 11 provides WAQC 2007 energy savings.

**Table 11.** Weatherization Assistance 2007  
Year-End Energy Savings

	kWh Savings for 2007
<b>CAP Agencies</b>	
CCOA.....	1,304,375
EI-Ada .....	1,181,873
EICAP .....	20,525
SCCAP.....	286,709
SEICAA.....	203,916
<b>ID Total</b>	<b>2,997,399</b>
MCOA—OR .....	25,921
HCSCS—OR.....	0
CCNO—OR .....	16,187
<b>OR Total</b>	<b>42,108</b>
<b>Total CAP Agencies</b>	<b>3,039,507</b>
<b>Non-Profit Projects</b>	
Non-Profits—ID .....	298,619
Non-Profits—OR .....	0
<b>Total Non-Profit</b>	<b>298,619</b>
<b>Total kWh Savings</b>	<b>3,338,126</b>

### Customer Satisfaction

In 2007, the WAQC program received satisfaction surveys from customers whose homes had been weatherized through the program. Customers were asked how much they thought the weatherization had improved the comfort of their home. Seventy-three percent of the respondents replied that they thought the improvements helped. Fifty-one percent of the respondents also thought that weatherization would reduce future bills, and 93% reported having tried energy-saving ideas in their home.

### 2008 Strategies

IPC staff will continue to work with Idaho Department of Health and Welfare, Oregon Housing and Community Services, CAPAI, and individual CAP agency management and staff to coordinate services and monitor the program to best serve special-needs customers.

**Residential Sector  
Energy Efficiency Program**

**Heating and Cooling  
Efficiency**

**Program Overview**

Target Customers.....	Residential customers
Program Life.....	2007–Ongoing

**Summary 2007**

Participation.....	4 homes
Total Utility Costs.....	\$488,211
Funding Sources	
Idaho Rider.....	\$482,051
Oregon Rider.....	\$3,289
BPA.....	\$0
IPC.....	\$2,871
Savings in kWh.....	1,595
Peak Savings in kW.....	N/A

During fall 2007, IPC sponsored classes on the proper sizing of equipment and over 200 technicians attended these classes.

**Results**

Four customer incentives were processed in 2007, resulting in a total energy savings of 1,595 kWh.

**2008 Strategies**

In 2008, IPC plans to increase awareness and participation in the program by implementing a comprehensive marketing/advertising strategy, and by increasing the number of contractors properly sizing and installing heating and cooling equipment.

**Description**

The Heating and Cooling Efficiency (H&CE) program began in September 2007. The objectives of this program are to acquire kWh savings and reduce summer peak demand through the implementation of energy-saving HVAC measures in the residential sector. Cash incentives are provided to residential customers and HVAC contractors who install eligible central air conditioners (CAC), heat pumps, and evaporative coolers. Incentives are awarded for qualifying heat pump tune-ups and CAC tune-ups meeting IPC's program specifications. All work must be performed by a participating HVAC company.

The H&CE program is available to IPC customers in Idaho and requires contractors to become "participating" companies who must sign an agreement with IPC. The participating companies must ensure their service technicians and installers attend required training on the proper installation of air conditioners and heat pumps. These companies must purchase and use TrueFlow™ Meters to measure air flow, and adhere to program specifications.

## COMMERCIAL/INDUSTRIAL SECTOR OVERVIEW

The commercial/industrial sector consists of approximately 62,000 customers, with 2,586 new customers added during 2007 for an increase of about 4.4%. Energy usage of customers within this sector varies from a few kWh each month to several hundred thousand kWh per month. This sector represents approximately 52% of IPC's total actual system energy sales. The industrial customers in this sector are IPC's largest individual energy consumers. This group consists of approximately 300 customers and accounts for about 29% of IPC's system energy sales.

### Programs

Three programs targeting different energy efficiency activities are available to the commercial/industrial customers. The newest program offered in this sector, Easy Upgrades, was launched in Idaho in February 2007 and in Oregon in May 2007. The program is designed to deliver energy efficiency and demand-side savings to all existing commercial and industrial customers. Easy Upgrades offers a menu of incentives for lighting, HVAC, motors, building shell, plug loads, and grocery refrigeration. With the launch of this program, the former

Oregon School Efficiency program was discontinued since schools can now participate in Easy Upgrades.

The Building Efficiency program for new construction projects achieves energy savings that are cost-effective at the time of construction. This program continues to offer energy-saving improvements for lighting, cooling, building shell, and energy control efficiency options.

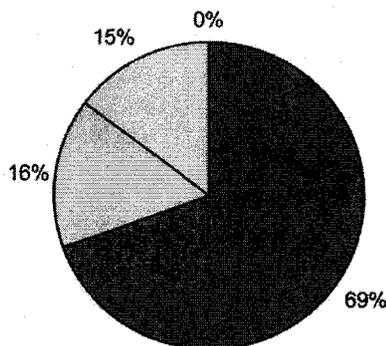
Both Building Efficiency and Easy Upgrades participants can receive incentives up to \$100,000 for any projects completed.

The Custom Efficiency program, formerly the Industrial Efficiency program, was expanded to include large commercial customers in 2007. This program is intended for larger custom projects.

IPC continues to offer its Oregon Commercial Audits program to medium and small commercial customers.

Commercial/industrial sector direct program expenses are shown by program in Figure 5 below.

Figure 5. 2007 Commercial/Industrial Sector Direct Program Expense



Commercial/Industrial Sector Programs	2007 Expenses	Percent of Expenses
■ Custom Efficiency	\$3,161,866	69.6%
■ Easy Upgrades	\$711,494	15.7%
■ Building Efficiency	\$669,032	14.7%
■ Oregon Commercial Audits	\$1,981	0.0%
<b>Total</b>	<b>\$4,542,392</b>	<b>100.0%</b>

## Results

Total annual energy savings for the commercial/industrial programs increased by about 88%, from 20,139,514 kWh in 2006 to 37,790,192 kWh in 2007. See Table 12. See Table 13 regarding the demand reduction attributable to 2007 commercial/industrial program activity.

**Table 12.** Commercial/Industrial Sector Energy Savings (kWh)

	kWh
Building Efficiency .....	2,817,248
Easy Upgrades.....	5,183,640
Oregon Commercial Audits .....	N/A
Custom Efficiency.....	29,789,304
<b>Total</b>	<b>37,790,192</b>

**Table 13.** Commercial/Industrial Sector Demand Reduction (kW)

	akW	Summer Peak kW
Building Efficiency .....	322	454
Easy Upgrades.....	592	780
Oregon Commercial Audits .....	N/A	N/A
Custom Efficiency.....	3,401	3,622
<b>Total</b>	<b>4,314</b>	<b>4,856</b>

## Commercial/Industrial Sector Energy Efficiency Program

### Building Efficiency

#### Program Overview

Target Customers.....	Commercial and Industrial new buildings and significant construction projects
Program Life	2005–Ongoing

#### Summary 2007

Participation.....	22 projects
Total Utility Costs.....	\$669,032
Funding Sources	
Idaho Rider.....	\$661,485
Oregon Rider.....	\$5,766
BPA.....	\$0
IPC.....	\$1,781
Savings in kWh.....	2,817,248
Peak Savings in kW.....	454 (summer peak)

### Description

The Building Efficiency program is available to commercial and industrial customers involved in the construction of new buildings or construction projects with significant additions, remodels, or expansions. Under this program, customers are able to apply energy efficient design features and technologies to their projects that would otherwise be lost opportunities for energy savings. Launched in Idaho in the spring of 2005, the program expanded to Oregon in January 2006.

Menu offerings within the Building Efficiency program include measures and incentives for lighting, cooling, building shell, and control efficiency options.

Program marketing enlists architects, engineers, and other local design professionals. Monthly e-mail updates are sent to building developers, design professionals, contractors, building owners, IPC field personnel, and other interested parties.

Through this program, IPC is a primary sponsor of the Boise Integrated Design Lab, which provides technical assistance and training seminars to local architects and designers. Much of this activity is coordinated and supported through NEEA's BetterBricks® program.

### Results

The success of the program in 2007 can partially be attributed to the addition of a group of three control measures added to the menu of Building Efficiency incentive opportunities. Approximately 31% of Building Efficiency participants took advantage of the energy management control system, the demand control ventilation, and/or the variable speed drives. These measures resulted in savings of over 1,500 MWh.

### Participation

During 2007, a total of 81 applicants submitted preliminary applications for projects to be completed from 2007 to 2009. A total of 22 projects were completed and their incentives awarded.

### Energy Impact

The annual energy savings increased by almost 300% over the prior year, from 704,541 kWh in 2006 to 2,817,248 kWh in 2007. The peak demand reduction increased by 34%, from 338 kW in 2006 to 454 kW in 2007.

### 2008 Strategies

In 2008, IPC will make minor modifications to the program in order to accommodate Idaho's recent adoption of the IECC, effective January 1, 2008. Eligibility requirements for three of the 14 measures changed for 2008.

Another change, effective February 1, 2008, is that all final applications for incentive payments must be submitted within 60 days of project completion.

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## Commercial/Industrial Sector Energy Efficiency Program

### Easy Upgrades

#### Program Overview

Target Customers.....	Commercial and industrial customers
Program Life.....	2007–Ongoing

#### Summary 2007

Participation.....	104
Total Utility Costs.....	\$711,494
Funding Sources	
Idaho Rider.....	\$680,376
Oregon Rider.....	\$28,014
BPA.....	\$0
IPC.....	\$3,105
Savings in kWh.....	5,183,640
Peak Savings in kW.....	780 (summer peak)

### Description

In February 2007, Easy Upgrades was launched in Idaho, followed by a May 2007 launch in Oregon. The Easy Upgrades program was designed to encourage commercial and industrial energy-saving retrofits. The program has six menus of eligible, energy-saving measures and incentives, covering various commercial energy-saving opportunities in lighting, HVAC, motors, building shell, plug loads, and grocery refrigeration.

Program marketing included advertising in key business publications and providing 10 workshops in February and September. The workshops were designed to network with contractors, vendors, and other trade allies, inform them of the Easy Upgrades program, and provide the tools to promote it. Additional program-related communications went out to trade allies, commercial customers, and IPC field personnel.

As part of this new program, a special promotion for directly installed VendingMiser™ controls was started in November. The energy-saving plug-in device

uses an occupancy-sensor based technology to manage energy used by vending machines. By the end of the year, over 1,000 controls were installed.

IPC helps sponsor the Lighting Design Lab (LDL) in Seattle through the Easy Upgrades program. LDL provides technical assistance and periodic local training seminars encouraging energy-saving lighting. Additionally, IPC is a sponsor of NEEA's BetterBricks® program, disseminating general energy efficiency information to commercial customers.

IPC also offered a special promotion for LEDs. This promotion focused on holiday lighting. Through a seasonal promotion, IPC provided a per-bulb incentive to non-residential customers to replace incandescent holiday lights with more efficient LED lights. Eight facilities participated in this promotion, resulting in savings of 11,779 kWh. High-profile community displays were targets for this promotion in order to showcase the benefits of LEDs. The Winter Garden Aglow display at the Idaho Botanical Garden is a good example of that. They replaced 14,700 incandescent bulbs for an estimated savings of 7,996 kWh. Two local newspapers covered this project. Signs posted near the display educated over 26,500 attendees about energy efficient LED lights.

### Results

#### Participation

During the year, 219 pre-applications were submitted and 104 projects were completed. Those totals included eight pre-applications and three completed projects in Oregon.

#### Energy Impact

The annual energy savings from the Easy Upgrades program was 5,183,640 kWh, which included the 1,116,288 kWh saved from installing VendingMisers™. The peak demand reduction impact for the Easy Upgrades program was 780 kW.

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## Customer Satisfaction

Input is regularly solicited from program participants to assess their satisfaction. Approximately one month after they receive their incentive payment, IPC provides each participant with a customer survey Web link. The survey asks a series of customer satisfaction questions about their participation.

As of January 2008, responses indicate that 48% of the respondents first learned of the Easy Upgrades program from their contractor, supplier, or vendor. The result supports IPC's focus on marketing and communicating with those same trade allies.

A key question asked on the survey was "Overall, how much would you agree that you received an excellent value from Idaho Power through this program?" Nearly 73% of the respondents replied "Strongly Agree," and nearly 12% replied "Somewhat Agree."

## 2008 Strategies

IPC will continue promoting the program to business and professional associations, will coordinate with trade allies, and will continue the VendingMiser™ promotion until 2,500 units are installed.

In 2008, several new features will be added. An electronic lighting calculator for proposed lighting retrofits will be offered to both customers and lighting contractors. This tool will easily analyze a project's energy savings potential, indicate incentives available, and show the net return on investment. The lighting calculator will be coupled with a Web-based electronic application. This should make the application process easier for customers and reduce processing time for IPC staff. A series of one-page testimonials from program participants is being created to promote the program. These success stories will be available as printed documents and displayed on the IPC Web site.

**Commercial/Industrial Sector  
Energy Efficiency Program**

## Oregon Commercial Audits

### Program Overview

Target Customers.....	Oregon commercial customers
Program Life.....	1983–Ongoing

### Summary 2007

Participation.....	8 audits
Total Utility Costs.....	\$1,981
Funding Sources	
Idaho Rider.....	\$0
Oregon Rider.....	\$1,800
BPA.....	\$0
IPC.....	\$181
Savings in kWh.....	N/A
Peak Savings in kW.....	N/A

### Description

Available to all Oregon commercial customers since 1983, the Oregon Commercial Audits program identifies opportunities for commercial building owners to achieve energy savings. Evaluations, through energy audits, and educational services are offered. Program benefits and offerings are communicated to the target market through an annual mailing to each customer in the commercial sector.

As was done in 2005 and 2006, IPC offered the *Saving Energy Dollars* publication to customers who wanted more information on saving energy and reducing expenses. New in 2007 was the Building Energy Efficiency Program (BEEP) workshop, offered for free in lieu of an energy audit, valued at \$150 per participant. The day-and-a-half workshop, held in Boise in September, focused on proven, no-cost and low-cost energy-saving techniques.

### Results

In late August 2007, IPC mailed its annual letter to all Oregon commercial customers. Customers were notified of the availability of no-cost

energy audits and the IPC publication *Saving Energy Dollars*. This mailing resulted in 16 customer responses for information or an energy audit. Eight customers requested only the *Saving Energy Dollars* publication. Eight customers returned requests for energy audits. IPC personnel conducted four of the audits and a third-party contractor conducted the other four audits. One customer took advantage of the free pass to the BEEP workshop in September.

### 2008 Strategies

In 2008, the third-party energy auditing contract is up for renewal. IPC is planning to issue a new Request for Proposal (RFP) from contractors for future energy audits. IPC is also evaluating the potential for enhanced correlation between the Oregon Commercial Audit program and the Easy Upgrades incentive program by using the energy audit as a tool to promote the Easy Upgrades incentive program.

## Commercial/Industrial Sector Energy Efficiency Program

### Custom Efficiency

#### Program Overview

Target Customers.....	Large industrial and commercial customers
Program Life.....	2003–Ongoing

#### Summary 2007

Participation.....	49 projects
Total Utility Costs.....	\$3,161,866
Funding Sources	
Idaho Rider.....	\$3,032,047
Oregon Rider.....	\$110,634
BPA.....	\$0
IPC.....	\$19,185
Savings in kWh.....	29,789,304
Peak Savings in kW.....	3,622 (summer peak)

### Description

Initially implemented as a pilot program in 2003, the Industrial Efficiency program was selected for implementation as a result of the 2004 Energy Plan. An expansion of this program was identified in the 2006 Energy Plan and, as a result, the program was expanded in 2007 and renamed the Custom Efficiency program. It is offered to all large commercial and industrial customers in Idaho and Oregon.

The Custom Efficiency program targets the acquisition of peak demand reduction and energy savings through the implementation of customized energy efficiency projects at customer sites.

Operationally, the program provides training and basic education on energy efficiency, energy auditing services for project identification and evaluation, and financial incentives for project implementation.

The key components in facilitating customer implementation of energy efficiency projects are

energy auditing, customer training, and education services.

Interested customers submit applications to IPC, identifying potential projects applicable to their facilities. The applications must provide sufficient information to support the energy savings calculations.

Project implementation begins after IPC's review and approval of an application, followed by the finalization of the terms and conditions of the applicant's and IPC's obligations. When possible, IPC conducts on-site power monitoring and data collection, before and after project implementation. The measurement and verification process ensures that projected energy savings are achieved. Verifying applicants' information confirms that demand reduction and energy savings are obtainable and within program guidelines.

If changes in scope occur in a project, the energy savings and incentive amounts are recalculated based on the actual installed equipment. Large, complex projects may take as long as two years to complete.

In 2007, the Custom Efficiency program incorporated several changes. The program was expanded to include all large commercial and industrial customers. Previously, only customers with a basic load capacity (BLC) of more than 500 kW were eligible to participate in the program. Incentive levels were increased to 70% of the project cost, or \$0.12/kWh, whichever is less. The incentives previously were capped at 50% of the project cost, or \$0.12/kWh, whichever was less. In 2007, the incentive cap was removed. Previously, the cap was \$100,000 per customer account.

The link between energy audits and completed projects is historically strong; thus, IPC expanded the number of contractors available to do customer scoping audits from one company in 2006 to four companies in 2007. Engineering firms were chosen for their expertise in all

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major equipment areas and their ability to provide resources for customers throughout IPC's service area.

**Results**

The Custom Efficiency program has achieved a high penetration rate, approximately 25%, with the large commercial and industrial customers.

**Participation**

IPC reviewed and approved 87 applications for incentive projects in 2007. A total of 49 projects were completed in 2007, consisting of 29 companies at 37 separate locations, and one Oregon project. Three more Oregon project applicants are scheduled for completion in early 2008.

**Energy Impact**

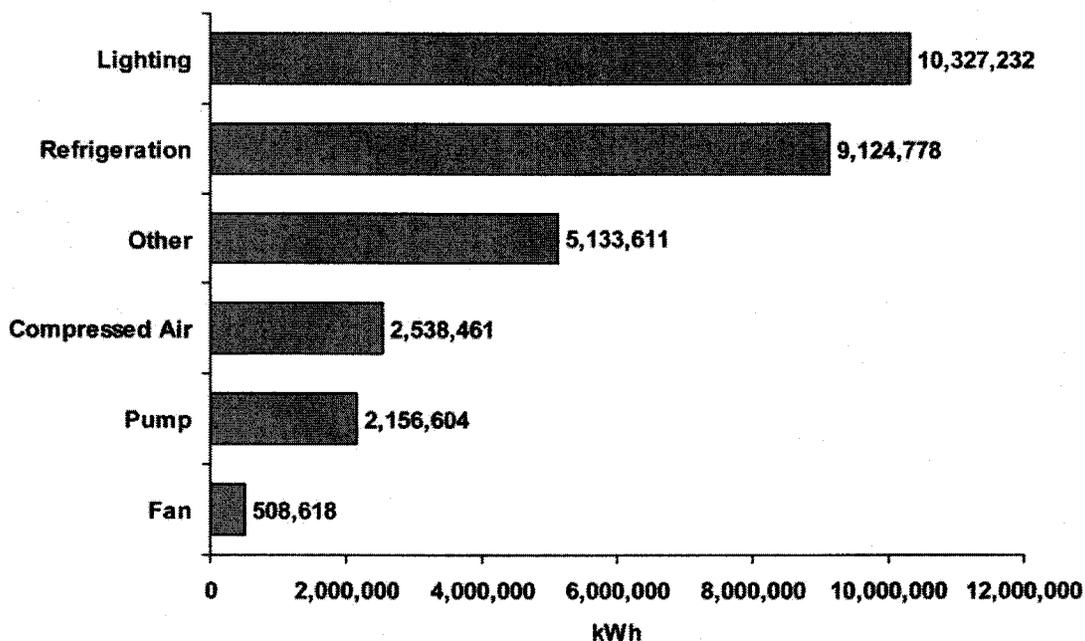
The Custom Efficiency program increased energy savings in 2007 by 55% over the prior year, from 19,212 MWh to 29,789 MWh. Additionally, completed projects increased by 23% and approved incentive applications

increased by 45%. Figure 6 shows Custom Efficiency annual energy savings by measure.

**2008 Strategies**

In 2008, IPC plans to continue the expansion of the Custom Efficiency program through a number of avenues. This will include direct marketing of the Custom Efficiency program by IPC field staff. IPC will continue to provide site visits and energy audits for project identification, technical training for customers, detailed energy audits for larger, complex projects, and delivery of Industrial Efficiency Alliance (IEA)-sponsored continuous energy improvement practices to customers.

Figure 6. 2007 Custom Efficiency Measures Annual Energy Savings (kWh)



## IRRIGATION SECTOR OVERVIEW

The irrigation sector is comprised of agricultural irrigation customers representing approximately 6,200 individuals with over 16,600 electrical service locations. Other irrigation users, such as golf courses and parks, are assigned to other sectors and are not eligible for DSM irrigation programs.

In total, the irrigation sector represents approximately 30% of IPC's summer peak load and 12% of total system energy sales per year. The load for this sector has not grown significantly in many years; however, there is a yearly variation in demand due primarily to the impact of weather on irrigation needs.

### Programs

IPC currently offers two programs to the irrigation sector: Irrigation Peak Rewards, a demand response program designed to decrease peak demand, and the Irrigation Efficiency Rewards, an energy efficiency program designed to encourage replacement or improvement of inefficient systems and components.

### Results

The Irrigation Peak Rewards program provided significant peak reduction during the summer of 2007, with an average peak load reduction of 28.9 MW and a maximum summer peak reduction of 37.4 MW. The maximum summer peak reduction was approximately 18% higher in 2007 than in 2006. This was due primarily to changes in the program incentive structure, which caused more two- and three-day-per-week participants.

The Irrigation Efficiency Rewards program had strong participation in 2007. However, the maturity of the program and the early adoption of the menu options by irrigators have caused a leveling off of projects in 2007. Program redesign, implemented in 2006, offered increased incentive levels and provided a menu option program that is popular with irrigation customers. The total energy savings for 2007 was 12,304 MWh on 819 projects across IPC's service area. Table 14 shows the 2007 irrigation sector's direct expenses, energy savings, and summer peak demand reduction attributable to Irrigation Peak Rewards and Irrigation Efficiency Rewards programs.

**Table 14.** 2007 Irrigation Program Summary, Energy Savings (kWh) and Demand Reduction (kW)

	Direct Expenses	kWh Energy Savings	kW Summer Peak Demand Reduction
Irrigation Efficiency Rewards .....	\$2,001,961	12,304,073	3,407
Irrigation Peak Rewards .....	\$1,615,881	N/A	37,441
<b>Total</b>	<b>\$3,617,843</b>	<b>12,304,073</b>	<b>40,848</b>

## Irrigation Sector Demand Response Program

### Irrigation Peak Rewards

#### Program Overview

Target Customers.....	Irrigation customers with 75+ hp irrigation systems
Program Life.....	2004–Ongoing

#### Summary 2007

Participation.....	947 service points
Total Utility Costs.....	\$1,615,881
Funding Sources	
Idaho Rider.....	\$1,520,106
Oregon Rider.....	\$54,747
BPA.....	\$0
IPC.....	\$41,028
Savings in kWh.....	N/A
Peak Savings in kW.....	37,441 (maximum summer reduction)

### Description

The Irrigation Peak Rewards program was initially implemented as a pilot program in 2004 and fully implemented in 2005 as a result of the 2004 Energy Plan planning process. In 2006, the program became available to IPC's Oregon customers.

It is a voluntary program targeted toward agricultural irrigation customers with pumps of 75 horsepower or greater. The program objective is to reduce peak electrical load during summer weekday afternoons. Preprogrammed electronic time-activated switches turn off the pumps of participating irrigation customers during intervals predetermined by IPC in exchange for a financial incentive.

Participants select one of three different options for the months of June, July, and August. A monthly demand credit is associated with each of the one-, two-, or three-day options and is paid based on the participating customer's monthly billing demand. Electric timers are programmed to turn off irrigation pumps during

preprogrammed time periods associated with the selected option.

During 2007, the following options and associated demand credit incentives were available to customers from 4 to 8 p.m. weekdays: a one-day-per-week, \$2.01 per kW demand; a two-days-per-week, \$3.36 per kW demand; or a three-days-per-week, \$4.36 per kW demand. Incentive amounts credited to customers' monthly bills are calculated separately for each metered service point.

IPC made changes to the program in 2007, as approved by the IPUC and OPUC.

Modifications increased the incentive amounts for the two-days and three-days per week options, and extended the program eligibility to service locations with at least 75 horsepower, in contrast to at least 100 horsepower required in 2006. A one-time \$250 fee is required from customers with pumps of 75 to 99 horsepower to help offset the cost of the switches and maintain the program's cost effectiveness.

### Results

#### Participation

Enlisted service points slightly increased during 2007, due to the lowered horsepower limit. Participation rates show the program achieved 19.5% participation with 947 service points out of 4,852 eligible service points. In 2006, there were 906 service points in Idaho and 13 service points in Oregon. In 2007, there were 925 service points in Idaho and 22 service points in Oregon.

#### Demand Impact

Each summer the program has produced substantial and measurable impacts on peak demand. During summer 2007, the program produced an average load reduction across all three months of 28.9 MW, with an average of 32.8 MW load reduction in the month of July. Maximum load reduction occurred during the second half of June when an estimated

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37.4 MW reduction was achieved. The customers' peak reduction loads are scheduled evenly each day of the week by IPC, based on historical information on system peaks.

### ***2008 Strategies***

IPC plans to operate the Irrigation Peak Rewards program without any changes to its structure for the 2008 irrigation season. However, in cooperation with the Idaho Irrigation Pumpers Association and IPUC staff, IPC is putting together a working group in the spring of 2008 to review the current program and to investigate a dispatchable demand response option for 2009.

## Irrigation Sector Energy Efficiency Program

### Irrigation Efficiency Rewards

#### Program Overview

Target Customers .....	Agricultural irrigation systems
Program Life .....	2003–Ongoing

#### Summary 2007

Participation .....	819 Projects
Total Utility Costs .....	\$2,001,961
Funding Sources	
Idaho Rider .....	\$1,881,116
Oregon Rider .....	\$93,924
BPA .....	\$0
IPC .....	\$26,922
Savings in kWh .....	12,304,073
Peak Savings in kW .....	3,407 (summer peak)

### Description

Initially implemented as a pilot program in 2003, the Irrigation Efficiency Rewards program was fully developed following its selection by the 2004 Energy Plan. Designed to improve the energy efficiency of irrigation systems in IPC's service area, a wide range of financial incentives and educational methods are provided. The program has been offered in Idaho since 2003 and in Oregon since 2006.

To meet the needs of various irrigation systems, two separate options are available for major or minor changes on new or existing systems.

The Custom Incentive Option provides component upgrades and large-scale improvements. For new systems, the incentive is \$0.25 per kWh saved above standard installation methods, not to exceed 10% of total project cost. For existing system upgrades, the incentive is \$0.25 per kWh saved or \$450 per kW, whichever is greater, not to exceed 75% of total project cost.

The Menu Incentive Option is designed for systems in which small maintenance upgrades

provide energy savings. Incentives vary based on specific component replacement.

Payments are calculated on predetermined average kWh savings per component. IPC reviews and analyzes each proposal for a system or component modification to determine and verify the energy savings.

In addition to incentives, the program offers customer education, training, and irrigation system assessments. IPC agricultural representatives sponsor, coordinate, conduct, and present educational workshops for irrigation customers, providing expert information and training across IPC's service area. Energy audits are provided to prospective customers by IPC agricultural representatives to evaluate potential savings.

Agricultural representatives from IPC also engage agricultural irrigation equipment dealers in training sessions, increasing awareness of the program and promoting it through the irrigation equipment distribution channels.

Marketing efforts include direct mailings, advertisements in agricultural publications, and agricultural trade show participation.

### Results

#### Participation

In 2007, a total of 819 projects were completed with irrigation customers, of which 120 were under the Custom Incentive Option and 699 were under the Menu Incentive Option. Incentive payments to customers in 2007 totaled \$1,744,260, down from \$2,477,598 paid in 2006. The decrease was due to a decline in total number of projects in 2007.

#### Energy Impact

The energy impact of the program was 12,304 MWh of energy savings and 3.4 MW of peak load reduction in 2007. In 2006, the energy

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savings was 16,986 MWh and 5.1 MW of peak load reduction.

### **2008 Strategies**

IPC plans to continue offering the program without any changes in 2008. However, ongoing IPC program reviews may result in adjustments in the incentive levels, program structure, and marketing efforts as operational experience merits.

## MARKET TRANSFORMATION

### Northwest Energy Efficiency Alliance (NEEA)

NEEA encourages and supports cost-effective market transformation efforts in Idaho, Oregon, Washington, and Montana. Through partnerships with local utilities, NEEA motivates marketplace adoption of energy saving services and technologies, and encourages regional education and marketing platforms. NEEA provides training and marketing resources across residential, commercial, and industrial sectors.

IPC accomplishes market transformation in its service area through membership and coordinated activities with NEEA.

#### *NEEA Activities*

##### **Industrial Efficiency Alliance (IEA) Activities in Idaho**

The IEA is a multi-year strategic effort designed to improve energy efficiency in two regional industries considered heavy energy users: the food processing and the pulp and paper industries. The IEA also works with companies that produce equipment and provide services for these industries and with the utilities that serve them.

Participants achieve cost savings through the adoption of energy efficient business practices. The IEA provides expert support, resources, and services to give companies tools and training to make energy efficiency a core business value. In exchange, participants are asked to commit to a Continuous Energy Improvement Program, which has the potential to increase production capacity, improve equipment reliability, and reduce operating costs and energy use by 5% to 20%. This effort is supported by providing technical knowledge for individuals, organizations, and manufacturing companies to

collaborate on energy efficiency implementation. IEA members include the BPA, regional utilities, the Energy Trust of Oregon (ETO), the Oregon Department of Energy (ODOE), and the Idaho Office of Energy Resources (OER). Training activity in 2007 included three industrial workshops co-sponsored by the IEA, IPC, and others. This training activity focused on pumps, motors, and industrial refrigeration.

##### **Commercial Alliance Activities in Idaho**

NEEA continued to provide support for commercial energy efficient activities in Idaho in 2007. NEEA continued funding the Boise Integrated Design Lab and local BetterBricks® trainings and workshops. NEEA sponsored Idaho's Fourth Annual BetterBricks® Awards, issued in October in conjunction with the Idaho Energy & Green Building Conference. IPC's commercial programs, Building Efficiency and Easy Upgrades, are designed to leverage NEEA, BetterBricks®, and Boise Integrated Design Lab activities.

##### **Distribution Efficiency Initiative**

In 2007, IPC continued to participate with other northwest utilities in NEEA's Distribution Efficiency Initiative project study.

##### **Phase 1 Projects Completed**

NEEA conducted a Distribution Efficiency Initiative Project study, which included a Load Research project and Pilot Demonstration projects. The Load Research project was designed to establish the relationship between applied voltage and energy, in addition to how applied voltage affects demand for different end-use load types such as electric heating, electric water heating, and air conditioning. The Pilot Demonstration projects controlled the voltage at the substation in order to determine the performance of different efficiency methods. Phase I was concluded in 2007.

The NEEA study's final report shows that operating a utility distribution system in the

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lower half of the acceptable voltage range of 120 through 114 volts saves energy (kWh), reduces demand (kW), and reduces reactive power (i.e., kilovolt ampere reactive [kvar]) requirements without negatively impacting the customer. The energy savings results are within the expected values of 1% to 3% total energy reduction, 2% to 4% reduction in kW demand, and a 4% to 10% reduction in kvar demand.

As part of the completion of this project, the 66 Home Voltage Regulators (HVRs) operating in southern Idaho since March 2006 were removed during the summer of 2007. The purpose of the HVR was to adjust service entrance voltage at the residence.

#### **Project for 2007**

A new pilot was implemented during the second quarter of 2007 to demonstrate remote end-of-feeder control of the station transformer load-tap changer. The project uses wireless communication between the end-of-feeder and the substation to adjust the substation voltage based on the measured end-of-feeder voltage. Application of technology allows better control of the end-of-feeder voltage.

#### **Residential NEEA Activities in Idaho**

NEEA continues to provide support for two programs offered by IPC: ENERGY STAR<sup>®</sup> Homes Northwest and ENERGY STAR<sup>®</sup> Lighting. In the ENERGY STAR<sup>®</sup> Homes Northwest program, NEEA offers technical assistance, funding for certifications, and builder and marketing support. In the Lighting program, NEEA offers manufacturer and sales coordination and marketing assistance through its contractor, Fluid Market Strategies.

#### **Other NEEA Activities in Idaho**

In 2007, IPC participated with NEEA to develop an RFP for the ENERGY STAR<sup>®</sup> Homes Northwest impact evaluation. This study will provide estimates for whole-house energy savings of ENERGY STAR<sup>®</sup>-certified homes in the Northwest region. The evaluation approach

began development in November 2007. Implementation of the analysis will begin in 2008, and final results will be provided in 2009.

During 2007, NEEA continued to support building code improvements to jurisdictions in Idaho in the form of funding for code training and other activities. Funding supported the efforts of the Idaho Building Code Coalition, which was instrumental in moving the 2006 IECC through the Idaho legislative process. The code was adopted during the 2007 legislative session and went into effect January 1, 2008. Its purpose is to increase energy efficiency in new construction by requiring improved building practices for the residential and commercial sectors.

Each year, NEEA underwrites the Idaho Energy Conference through a contract with the Association of Idaho Cities. NEEA continues to provide general information support to the region by funding the EnergyIdeas Clearinghouse<sup>®</sup> and ConWeb<sup>®</sup>.

NEEA also funded a variety of research projects that were reported on in 2007. These reports are valuable to IPC for providing information for creating and evaluating IPC's programs. These research projects included the Existing Multifamily Tenant Appliance Efficiency Saturation Study; Single-Family Existing Construction Residential Stock Assessment; Multifamily Residential New Construction Characteristics and Practices; and Residential New Construction Characteristics and Practices.

#### **NEEA Funding**

In 2005, IPC began the first year of the 2005–2009 contract and funding agreement with NEEA. Per this agreement, IPC committed to fund \$1,300,000 annually in support of NEEA's implementation of market transformation programs in IPC's service area. Of this amount in 2007, 70% was funded through the Idaho and Oregon Riders, and 30%

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was funded by a credit accumulated during the previous contract period.

In 2007, IPC paid \$891,472 to NEEA. The Idaho jurisdictional share of the payments was \$846,898, while \$44,574 was paid for the Oregon jurisdiction. Other expenses associated with NEEA activities, such as administration and travel, are paid by IPC.

Preliminary estimates reported by NEEA indicate that IPC's share of regional market transformation MWh savings for 2007 is 28,601 MWh, or 3.3 aMW. IPC relies on NEEA to report the energy savings and other benefits of NEEA's regional portfolio of initiatives.

For further information about NEEA, visit their Web site at [www.nwalliance.org](http://www.nwalliance.org).

## ENERGY EFFICIENCY ADVISORY GROUP (EEAG)

Formed in May 2002, the EEAG provides input on formulating and implementing energy efficiency and demand reduction programs funded by the Rider. Currently, the EEAG consists of 12 members from across IPC's service area and the Northwest. Members represent a crosssection of customers, including delegates from the residential, industrial, commercial, and irrigation sectors, as well as representatives for the elderly, low income, environmental organizations, state agencies, public utility commissions, and IPC.

In 2007, the EEAG met three times: on March 23, September 12, and November 14. During the meetings, IPC requested recommendations on new program proposals, provided a status of the Rider funding and expenses, updated ongoing programs and projects, and supplied information on DSM issues.

### EEAG Program Recommendations

The following section provides a review of the input provided to IPC by the EEAG regarding major program implementation and operational issues in 2007. Please note that all operational DSM programs have been reviewed by EEAG; however, only substantial changes or modifications associated with EEAG input are presented below.

#### Residential Programs

Residential programs reviewed in 2007 included Heating and Cooling Efficiency, ENERGY STAR® Appliances, ENERGY STAR® Homes Northwest, and A/C Cool Credit. In addition, the group was provided updates for ENERGY STAR® Lighting, Rebate Advantage, and Energy House Calls.

#### Heating and Cooling Efficiency

- Look to Delivery Service Representatives to recommend program contractors in their area. *(Delivery Service Reps have been assigned specific DSM tasks and goals in 2007, which will be tracked against actual performance.)*
- Contact outside sources for advice regarding the design of the HVAC program. *(Contractors, other utilities, and regional HVAC program experts were consulted extensively for the design of the Heating and Cooling Efficiency program.)*
- Implement quality assurance in the Heating and Cooling program. *(Quality assurance by a third party will occur in approximately 7% of all installs for this program.)*
- To accurately measure A/C savings, strictly measure using a Seasonal Energy Efficiency Ratio (SEER) 13 baseline. *(Cost effectiveness for the Heating and Cooling program used SEER 13 as the savings baseline.)*
- Implement a sales incentive for contractors in the Heating and Cooling program. *(Contractors receive \$50 for services related to this program.)*
- Offer a design workshop and training to HVAC contractors. *(Training workshops for each region in IPC were held in 2007, and additional workshops are planned in 2008.)*

#### ENERGY STAR® Appliances

- Take old refrigerators out of service. *(Currently exploring options to offer a refrigerator recycling program.)*
- Join with water utility to market clothes washers. *(No local water utilities in IPC)*

*service area offer energy efficiency incentives at this time, but will explore avenues for joint marketing efforts.)*

- Do not provide incentives for plasma television sets. *(It's unlikely that plasma TVs would prove cost effective because of their high energy use.)*
- Collaborate with local appliance retailers. *(Developing relationships and materials for appliance retailers to use as part of the ENERGY STAR® appliance program.)*
- An automated process would ensure that applications and incentives are processed efficiently. *(Incentive processing was automated in 2007 to increase accuracy and improve customer response time.)*

#### **ENERGY STAR® Homes Northwest**

- Educate mortgage lenders about ENERGY STAR® Homes Northwest. *(Lenders will be invited to realtor training sessions.)*
- Several members suggested that the A/C Cool Credit program be mandatory for ENERGY STAR® Homes. It was also suggested that customers who do not participate in A/C Cool Credit have a higher connection fee for their new homes. *(IPC has no plans to require customers to participate in programs, the preference being to pursue voluntary participation which leads to better customer satisfaction.)*

#### **General Suggestions**

- When a bill stuffer is sent out, follow up with a co-marketing piece, like a radio or newspaper ad. *(Marketing plans will include opportunities for cross-marketing programs through various media channels.)*

- Perhaps limit the amount of information included in the bills so that people are more likely to read the bill stuffer. *(Because of the number of programs and the demand for bill stuffer area availability, most slots will be filled throughout the calendar year on the bill stuffer calendar.)*
- Target those markets where customers may not be expecting energy efficiency messages. *(Currently exploring ways to co-market a bill stuffer with other utilities in Boise.)*

#### **Commercial and Industrial Programs**

At the September EEAG meeting, IPC presented an Easy Upgrades program report, and offered proposals for a single-measure promotion for the VendingMiser™ program and a Holiday Lighting program for commercial customers. Members provided the following suggestions:

- Encourage short-term promotions to take advantage of the market environment, such as the Christmas tree lights. *(VendingMiser™ program began in December 2007 and will go through April 2008.)*
- Large numbers of vending machines that came out in the 1990s are about to be refurbished, and the region is looking at partnering with vending machine manufacturers to improve energy efficiency in older models. *(IPC will investigate these opportunities in the future.)*
- The consensus of the group was to move forward with the VendingMiser™ promotion, pending full, cost-effective analysis. *(The promotion launched in December 2007.)*

## **Irrigation Programs**

The Irrigation Peak Rewards program is a successful program, with visible megawatt reductions in load observable at the system load data level at 4 p.m. on scheduled summer weekdays. A program update was provided at the November EEAG meeting. Questions and comments included:

- A question was posed regarding the necessity of requiring customers to sign up each year to participate in the Peak Rewards program. *(There are several reasons that make it more effective to do it this way: crop rotation, lease agreements that are not finalized until the middle of the next year, equipment issues, and quality assurance issues.)*
- Offer an increased incentive to customers to entice them to sign up sooner. *(An "early install incentive" might get customers in the program sooner, but not necessarily more of them, because there are other constraints on irrigators that prevent them from signing up. One member stated that he has some irrigation systems that will never be put on the program due to their complexity.)*

## **Local Energy Efficiency Funds (LEEF)**

The EEAG was consulted regarding the purpose and project cap limit of the Small Project/Education Funds, which are now called the Local Energy Efficiency Funds (LEEF). When the Small Project/Education Fund was authorized in 2003, individual projects were limited to \$5,000. A proposal was made to increase individual expenditures through this fund, as the number of requests greater than \$5,000 has increased over the years.

Discussion focused on the relative merits of the fund, and its flexibility in responding to unsolicited proposals from customers.

The suggestion was made that if it looks like the project could be turned into a program and made available to others, that potential should be pursued.

It was the general consensus of the group that this fund should have the flexibility to fund projects above \$5,000 but, in most cases, not exceed \$10,000. It was also suggested that the pool of fund dollars should be allowed to grow as well so that funds are available for beneficial projects.

*IPC will fund projects larger in scope in the future, and solicit feedback from EEAG for specific proposals that exceed \$10,000.*

## OTHER PROGRAMS AND ACTIVITIES

### Residential Energy Efficiency Education Initiative

IPC recognizes the value of general energy efficiency awareness and education in creating customer demand for, and satisfaction with, its programs. Increased awareness of energy efficiency and IPC's residential programs are being achieved through the Residential Energy Efficiency Education Initiative.

#### *Activities*

Program activities during 2007 included the design and implementation of a five-class series promoting energy efficiency to an adult audience, titled Fall Energy Efficiency and Sustainability Series. Topics covered included simple no- and low-cost ways to save energy, weatherization, insulation, ventilation, green building, sustainable building with Leadership in Energy and Environmental Design (LEED), easy ideas of ways to re-think, reduce, reuse, recycle, net metering, and renewable energy sources. The classes were well attended all five nights, with 50 to 100 attendees per night.

Another outcome of this program was to produce printed materials to improve customer awareness of energy saving ideas, including the Summer and Winter Energy Savings Tip cards and the Home Energy Efficiency Audit brochures.

Through use of the Internet, the Residential Energy Efficiency Education Initiative program reached out to IPC's customers and others offering energy efficiency ideas and solutions. The IPC Web site pages related to energy efficiency information were evaluated and updated.

In addition to conducting workshops and seminars for local groups to promote IPC's residential programs and energy savings ideas, IPC conducted open houses and outreach programs to build and foster employee awareness for energy efficiency. The primary goal was to focus on general efficiency and increased participation in existing program offerings.

### Commercial Education Initiative

IPC has long recognized the value and importance of providing energy efficiency information to commercial customers. Efforts to develop a commercial customer energy education initiative began in the fall of 2007. The focus was on the development of a short-term pilot program targeting small commercial customers and the development of an energy efficiency education strategy for all commercial customers.

During the fall of 2007, goals were established and a marketing plan was developed to reach all commercial customers with energy efficiency education. Field research was conducted with IPC personnel assisting in gauging the energy education needs of the customers. Additional research was conducted assessing the industry's best practices for small business energy efficiency education. An implementation plan was developed and is due to launch in 2008. The main objectives are to increase participation in existing commercial DSM programs, enhance customer satisfaction, and reduce energy use for this customer segment. The Commercial Education Initiative will compliment and support existing DSM program activities.

### Local Energy Efficiency Funds (LEEF)

Formerly called the Small Projects and Education Fund, the purpose of LEEF is to provide modest funding for short-term projects.

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and activities that do not fit within other categories of energy efficiency programs but still provide a defined benefit to furthering DSM targets.

In 2007, one project met these criteria. The OER arranged for the installation and long-term monitoring of a Hallowell International cold climate heat pump during the 2007–2008 heating season in McCall, Idaho. The home was previously heated with an electric forced-air furnace and was certified in 2006 as an ENERGY STAR® home. In 2007, LEEF awarded \$7,500 to support the research project and to test the new heat pump's effectiveness in a cold climate. In return, OER will provide all data, data analyses, and reports that result from this study.

## REGULATORY INITIATIVES

This past year was the first of a three-year pilot period during which IPC is testing the effects of a Fixed-Cost Adjustment (FCA) and a Performance-Based DSM Incentive. The two pilots are being operated on a limited basis to allow for a thorough evaluation to be conducted prior to a broader application of the financial mechanisms.

### Fixed-Cost Adjustment Pilot

The FCA is a true-up mechanism that “decouples,” or separates, energy sales from revenue in order to remove the financial disincentive that exists when IPC invests in DSM resources. On March 12, 2007, the IPUC issued Order No. 30267 authorizing a three-year pilot of the FCA within the residential and small commercial customer classes. Under the FCA, rates are adjusted annually up or down to recover or refund the difference between the fixed-costs authorized by the IPUC in the most recent rate case and the fixed-costs that IPC actually received through energy sales during the previous year. Through the application of this true-up mechanism, IPC is not financially harmed by decreases in energy sales within the residential and small commercial customer classes, thus removing any disincentives for IPC to pursue DSM opportunities with those customers.

The FCA pilot is limited to the residential and small commercial classes in recognition of the fact that, for these customers, a high percentage of fixed costs are recovered through energy charges. Confining the pilot to the residential and small commercial classes also allows the true-up mechanism to be tested on a limited basis to minimize any unintended consequences.

### Performance-Based DSM Incentive Pilot

To compliment the FCA pilot, IPC is testing the effects of a Performance-Based DSM Incentive mechanism over the same three-year period. On March 12, 2007, the IPUC issued Order No. 30268 authorizing the implementation of a Performance-Based DSM Incentive pilot that allows IPC to retain a portion of the financial benefits resulting from DSM activities when energy savings targets are exceeded. IPC is also subject to a penalty under the incentive pilot should it fail to meet energy savings levels previously achieved. During the pilot period, the incentive mechanism is being applied only to the ENERGY STAR<sup>®</sup> Homes Northwest Program. By applying this mechanism on a limited basis, IPC is able to gain a better understanding of the effects of a performance incentive while minimizing the potential impact to customers. IPC ultimately intends to use the information gained during the pilot period to develop a performance-based incentive mechanism that can be applied to the entire portfolio of DSM programs.

### Enhanced Commitment to Energy Efficiency and DSM

As part of the FCA implementation process, IPC is committed to enhancing its efforts towards promoting energy efficiency in several key areas including, but not limited to:

- A broad availability of efficiency and load management programs.
- Building code improvement activity.
- Pursuit of appliance code standards.
- Expansion of DSM programs beyond peak shaving/load shifting programs.
- Third-party verification.

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Throughout 2007, and increasingly during the last three quarters of the year after issuance of IPCU Order No. 30267, IPC actively pursued numerous, additional opportunities to promote energy efficiency.

### **Availability of Efficiency and Load Management Programs**

IPC offers an array of energy efficiency and demand response programs spanning all of the major customer segments. The majority of IPC's DSM programs were available prior to implementation of the FCA. However, since implementation of the FCA, IPC has focused additional resources toward energy efficiency education and program marketing.

IPC continued to increase energy efficiency awareness among its customers through a variety of media outlets. Incremental education and outreach activities in 2007 included participation in Earth Day events, publication of a Summer Tips card on energy efficiency, conducting a Fall Energy Efficiency and Sustainability Series at the Boise Public Library, and a publication of a Holiday Purchases Energy Efficiency Tips flyer. Additionally, the publication of the Partners in Conservation Calendar provided energy efficiency information to program participants, trade allies, and IPC employees. IPC also distributed energy efficiency information via 22 media updates, 12 *Customer Connection* newsletters included in monthly bills, six radio interviews, five bill inserts, and one press release.

The promotion of energy efficient lighting received additional focus in 2007. In the fall, IPC sponsored a lighting workshop conducted by the staff of the Seattle-based Lighting Design Lab. IPC staff also conducted 17 in-store customer education outreach events to inform customers about the benefits of energy efficient lighting. Furthermore, IPC developed and implemented a communication strategy to address customer concerns about the mercury

content of CFL bulbs and to educate customers on the proper disposal of CFLs.

DSM staff provided program and general energy efficiency information to five engineering firms and two state agencies. These direct marketing efforts in 2007 within the commercial and industrial customer segments were aimed at architects and engineers to enhance their awareness of IPC's DSM programs and how energy efficiency can be incorporated into new projects.

IPC also incorporated the offerings of the IEA through NEEA to IPC food processing customers. In 2007, there were 19 facilities in the IPC service area engaged in various degrees with the IEA and the implementation of Continuous Energy Improvement practices at their facilities.

Other actions in 2007 included IPC joining the BPA-sponsored Utility Sounding Board (USB). Networking and regional coordination are benefits of participation in this group.

IPC also brought grocery refrigeration experts to Boise and put on grocery efficiency trainings and co-sponsored a BEEP workshop in September.

### **Building Code Improvement Activity**

In 2007, the Idaho legislature adopted the IECC 2006 Energy Code, which IPC staff supported through the Idaho Building Code Coalition. The new code went into effect in January 2008.

In 2007, IPC staff met with the Boise Climate Protection Program Advisory Committee and the Caldwell Planning Department to support efforts by these groups to improve residential and commercial building codes. Both of these meetings were an opportunity to educate staff about the ENERGY STAR® Homes Northwest program and discuss requiring all residential

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new construction in their respective jurisdictions to conform to the ENERGY STAR® Homes Northwest standard.

### ***Pursuit of Appliance Code Standards***

IPC contracted with Quantec, LLC, to conduct a study of potential savings and costs associated with enacting appliance efficiency standards in Idaho similar to those recently enacted in Oregon. The results of Quantec's assessment and recommendations will be incorporated into the 2009 Energy Plan to determine the economic viability of adopting such standards in Idaho.

### ***Expansion of DSM Programs Beyond Peak-Shaving/ Load-Shifting Programs***

IPC looks for opportunities to enhance or expand its DSM program offering. For example, in 2007 a new incentive-based holiday lighting program was offered to commercial customers. This program was implemented on an accelerated schedule to provide additional energy savings within the commercial customer segment in 2007 and to raise awareness of LED lighting among all customer classes. Additionally, a direct-install VendingMiser™ promotion began in 2007 and will continue in 2008. This promotion will provide small and large commercial customers with free controls to cut energy use on their refrigerated beverage vending machines. This promotion greatly increased participation and energy savings. In the first seven months of this program, IPC received 136 applications for VendingMiser™ installation, and in the last two months IPC, through its vendor, installed 83 VendingMisers™.

Late in 2007, IPC issued an RFP seeking professional services to determine potential DSM energy savings and peak load reduction within IPC's service area. Nexant, a San

Francisco-based consulting firm, was selected to conduct the DSM potential study and provide a DSM simulation model, along with DSM program recommendations that can be implemented to achieve the identified potential. This project is expected to be completed by July 31, 2008. The information provided by the potential study will serve as the basis for DSM resource options analyzed in the 2009 Energy Plan.

### ***Third-Party Verification***

IPC utilizes third-party consultants and agents whenever possible, practical, and affordable. Consultants verify the quality of work conducted, the amount of energy savings achieved, and also obtain data on energy efficiency and demand response measures and programs. The following are examples of IPC's ongoing utilization of third parties to monitor and verify its DSM program performance:

- IPC is a funder of, and participant in, the Regional Technical Forum (RTF). The RTF is an advisory committee established in 1999 to develop standards to verify and evaluate savings of energy efficiency programs and measures. IPC views the RTF as a reliable third-party source for information on programs and measures and used the RTF databases to provide deemed savings for some energy efficiency measures.
- In 2007, IPC contracted with a third-party consulting firm, Ecotope Consulting, to reevaluate the ENERGY STAR® Homes Northwest measures and savings after the new IECC 2006 building codes were implemented in Idaho. This analysis resulted in several program changes, including a revised incentive and revised assumed energy savings per home for 2008.
- The ENERGY STAR® Homes Northwest program regularly utilizes certified Home Performance Specialists for independent

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third-party verification, ensuring that each ENERGY STAR® home is being built to ENERGY STAR® standards. The Idaho OER then certifies each of these homes as an ENERGY STAR® home.

- The Energy House Calls program contracts with a third party consultant to do quality assurance on 5% of homes serviced by the program. This consultant visits the selected sites within approximately one month of the energy house call and verifies that the energy efficiency measures provided by IPC's third-party installation contractor were performed to program specifications.
- The Heating and Cooling Efficiency program, new in 2007, has begun training a third-party consultant to verify savings on 5–10% of all projects and plans on implementing this process in 2008.

### ***IPC's Internal Energy Efficiency Commitment***

IPC's commitment towards promoting energy efficiency extends beyond encouraging, incenting, and educating its customers. In 2007, IPC committed to pilot an integrated design approach for a new operations facility to be constructed in Lake Fork, Idaho. The Long Valley Operations Center will be the first new facility built by IPC to use this process. This method of project development brings the owner, design team, contractors, and commissioning agent together at the inception of the project to take advantage of their combined expertise and maximize coordination throughout the process. Initial meetings defined IPC's goals for the project, and the goals were linked to potential LEED credits. Results support a strong case for LEED Silver certification and the potential exists for LEED Gold certification on the project.

The design team's goal is to pursue all 10 energy efficiency credits, which would make

the facility at least 42% more efficient than the American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) 2003 standards. Opportunities for renewable generation and other innovative design solutions will be investigated throughout the design phase. In addition to energy efficiency, other important IPC goals are to ensure the facility fits well into the surrounding community while providing local IPC employees with a functional operations center. IPC's decision to take a leadership position in high-performance buildings and sustainable design for their own facilities demonstrates not only enhanced commitment to energy efficiency but can serve as a model for other companies.

In 2007, IPC began retrofitting its Corporate Headquarters (CHQ) with energy efficiency projects. In 2007, IPC increased the energy efficiency of the HVAC system at the CHQ by installing a new system to centrally control and better manage the system from an energy perspective. IPC also implemented nighttime lighting controls at the CHQ in order to gain efficient use of lighting electricity. IPC is systematically replacing older, inefficient lighting in its facilities with more efficient lights.

Table 15 shows IPC energy savings in 2007 as compared to both IPC operational targets as well as IRP targeted savings. The operational targets for the commercial/industrial programs were reduced from the original energy plan targets to account for the timing of new program development within the commercial sector.

**Table 15. 2007 IPC DSM Program Targets and Results**

	<b>2007 IPC Operational Targets</b>	<b>2007 Energy Plan Targets</b>	<b>2007 Savings</b>
<b>Demand Response Programs</b>	<b>MW</b>	<b>MW</b>	<b>MW</b>
Residential and Irrigation .....	47.8	39.4	48.2
<b>Energy Efficiency Programs</b>	<b>MWh</b>	<b>MWh</b>	<b>MWh</b>
Residential .....	11,231	11,230	12,441
Commercial/Industrial .....	21,447	24,397	37,790
Irrigation .....	11,940	5,200	12,304
<b>Total</b>	<b>44,618</b>	<b>40,827</b>	<b>62,535</b>

## APPENDICES

The following financial and performance tables provide a summary of program activity, including program expenses, funding sources, energy savings, and levelized costs for savings.

**Appendix 1. Idaho Rider, Oregon Rider, BPA, and NEEA Funding Balances**

<b>Idaho Energy Efficiency Rider</b>	
2007 Beginning Balance .....	\$5,934,463.21
2007 Funding plus Accrued Interest.....	9,036,071.75
Total 2007 Funds	14,970,534.96
2007 Expense .....	(13,487,460.38)
<b>2007 Year-End Balance</b>	<b>\$1,483,074.58</b>

<b>Oregon Energy Efficiency Rider</b>	
2007 Beginning Balance .....	\$393,731.19
2007 Funding plus Accrued Interest.....	425,682.64
Total 2007 Funds	819,413.83
2007 Expense .....	(409,188.37)
<b>2007 Year-End Balance</b>	<b>\$410,225.46</b>

<b>BPA Funding</b>	
Total Funding and Accrued Interest October 2001–December 2006 .....	\$2,909,157.08
2007 Funding plus Accrued Interest.....	247,732.51
Total Funds May 2002–December 2007	3,156,889.59
Total Expense—Inception through December 2006.....	(2,909,157.08)
2007 Expense .....	(200,685.96)
<b>Total BPA Funded Expenses</b> .....	<b>(3,109,843.04)</b>
<b>2007 Year-End Balance<sup>(a)</sup></b>	<b>\$47,046.55</b>

<b>NEEA Payments and Escrow Credit Funds Balance</b>	
2007 IPC Contractual Obligation.....	\$1,300,000.00
Credit Applied to 2007 Contractual Obligation .....	(325,588.00)
Interest Credit Applied to 2007 Contract Obligation .....	(68,159.00)
Interest Credit Applied to 2008 Contract Obligation <sup>(b)</sup> .....	(14,781.00)
Total 2007 Cash Payments by IPC .....	<u>891,472.00</u>
<b>Credit Balance</b>	
Beginning Balance Funds Held by NEEA .....	(976,771.00)
2007 Credit Applied to Contract Obligation.....	325,588.00
<b>2007 Year-End Credit Balance</b>	<b>(\$651,183.00)</b>

(a) The 2007 balance of BPA funds was committed to two Solar 4 R Schools projects prior to the suspension of BPA funding in 2007. These projects are scheduled for completion in 2008.

(b) The first quarter invoice for the IPC 2008 contractual obligation to NEEA was processed in December 2007 with the amount scheduled to be amortized over the first quarter. Interest credit was immediately recognized in 2007.

**Appendix 2. 2007 DSM Expenses by Funding Source (Dollars)**

Sector/Program	Idaho Rider	Oregon Rider	BPA	IPC	Total Program
<b>Energy Efficiency/Demand Response</b>					
Residential					
A/C Cool Credit.....	2,421,461	0	0	4,692	\$ 2,426,154
Appliance Program .....	8,746	460	0	69	\$ 9,275
Energy House Calls .....	251,743	3,349	80,830	450	\$ 336,372
ENERGY STAR® Homes Northwest.....	451,775	12,249	0	11,020	\$ 475,044
Heating and Cooling Efficiency .....	482,051	3,289	0	2,871	\$ 488,211
Oregon Residential Weatherization .....	0	0	0	3,781	\$ 3,781
Rebate Advantage .....	58,854	4,609	25,073	733	\$ 89,269
ENERGY STAR® Lighting.....	519,818	11,787	15,595	10,445	\$ 557,646
WAQC.....	0	0	28,035	1,295,588	\$ 1,323,624
Commercial/Industrial					
Commercial Building Efficiency.....	661,485	5,766	0	1,781	\$ 669,032
Easy Upgrades .....	680,376	28,014	0	3,105	\$ 711,494
Oregon Commercial Audit.....	0	1,800	0	181	\$ 1,981
Custom Efficiency .....	3,032,047	110,634	0	19,185	\$ 3,161,866
Irrigation					
Irrigation Efficiency Rewards .....	1,881,116	93,924	0	26,922	\$ 2,001,961
Irrigation Peak Rewards.....	1,520,106	54,747	0	41,028	\$ 1,615,881
<b>Energy Efficiency/Demand Response Total</b>	<b>11,969,578</b>	<b>330,627</b>	<b>149,534</b>	<b>1,421,852</b>	<b>\$13,871,592</b>
<b>Market Transformation</b>					
NEEA.....	846,898	44,574	0	1,868	\$ 893,340
<b>Market Transformation Total</b>	<b>846,898</b>	<b>44,574</b>	<b>0</b>	<b>1,868</b>	<b>\$ 893,340</b>
<b>Other Programs and Activities</b>					
Commercial					
Commercial Education Initiative.....	25,427	1,314	0	82	\$ 26,823
Other					
BPA CRC Renewables .....	0	0	31,645	0	\$ 31,645
Distribution Efficiency Initiative <sup>(a)</sup> .....	6,514	343	0	2,130	\$ 8,987
DSM Direct Program Overhead .....	54,339	2,465	0	105	\$ 56,909
LEEF <sup>(b)</sup> .....	7,571	(50)	0	0	\$ 7,520
<b>Other Programs and Activities Total</b>	<b>93,851</b>	<b>4,072</b>	<b>31,645</b>	<b>2,317</b>	<b>\$ 131,885</b>
<b>Indirect Program Expense</b>					
DSM Accounting and Analysis.....	564,129	29,367	0	139,006	\$ 732,503
Energy Efficiency Advisory Group .....	2,488	109	0	0	\$ 2,597
Special Accounting Entries .....	10,516	439	19,507		\$ 30,462
<b>Indirect Program Expense Total</b>	<b>577,133</b>	<b>29,915</b>	<b>19,507</b>	<b>139,006</b>	<b>\$ 765,561</b>
<b>Totals</b>	<b>\$13,487,460</b>	<b>\$409,188</b>	<b>\$200,686</b>	<b>\$1,565,043</b>	<b>\$15,662,378</b>

<sup>(a)</sup>IPC portion of Distribution Efficiency Initiative expenses will be reversed in 2008.

<sup>(b)</sup>Oregon correction for 2006 entry for bulbs purchased and used in Idaho.

Appendix 3. 2007 DSM Program Activity

Program	Participants (Number) (Units)	Utility(b) (dollars)	Resource(c) (dollars)	Savings		Levelized Cost(e)	
				Annual Energy (kWh)	Summer Peak Demand(d) (kW)	Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Demand Response</b>							
A/C Cool Credit	13,692 homes	\$2,426,154	\$2,199,486		10,762 N/A	N/A	N/A
Irrigation Peak Rewards	947 service points	\$1,615,881	\$239,855		37,441 N/A	N/A	N/A
<b>Energy Efficiency</b>							
<b>Residential</b>							
Appliance Program		\$9,275					
Energy House Calls	700 homes	\$336,372	\$336,372	699,899	20	\$0.039	\$0.039
ENERGY STAR® Homes Northwest	303 homes	\$475,044	\$566,247	629,634	606	\$0.056	\$0.067
ENERGY STAR® Lighting	219,739 CFL bulbs	\$557,646	\$668,756	7,207,439	7	\$0.012	\$0.015
Heating and Cooling Efficiency	4 homes	\$488,211	\$494,989	1,595	18	N/A	N/A
Oregon Residential Weatherization	1 homes	\$3,781	\$5,589	9,971	25	\$0.028	\$0.042
Rebate Advantage	123 homes	\$89,269	\$182,152	554,018	45	\$0.010	\$0.021
WAQC—ID	397 homes	\$1,290,016	\$1,754,191	3,296,019	25	\$0.029	\$0.040
WAQC—OR	11 projects	\$33,607	\$44,613	42,108	25	\$0.059	\$0.079
<b>Commercial</b>							
Building Efficiency(1)	22 projects	\$669,032	\$829,600	2,817,248	454	\$0.026	\$0.032
Easy Upgrades	104 projects	\$711,494	\$1,882,035	5,183,640	780	\$0.015	\$0.040
Oregon Commercial Audits	8 audits	\$1,981	\$1,981	0	N/A	N/A	N/A
<b>Industrial</b>							
Custom Efficiency	49 projects	\$3,161,866	\$7,012,686	29,789,304	3,622	\$0.012	\$0.026
<b>Irrigation</b>							
Irrigation Efficiency Rewards(2)	819 projects	\$2,001,961	\$8,694,772	12,304,073	3,407	\$0.024	\$0.103

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**Appendix 3. 2007 DSM Program Activity (continued)**

Program	Total Costs			Savings		Levelized Cost <sup>(a)</sup>	
	Participants (Number) (Units)	Utility <sup>(b)</sup> (dollars)	Resource <sup>(c)</sup> (dollars)	Annual Energy (kWh)	Summer Peak Demand <sup>(d)</sup> (kW)	Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Market Transformation</b>							
NEEA <sup>(3)</sup>		\$893,340	\$893,340	28,601,410			
<b>Other Programs and Activities</b>							
<b>Residential</b>							
Residential Education Initiative <sup>(4)</sup>							
<b>Commercial</b>							
Commercial Education Initiative		\$26,823	\$26,823				
<b>Other</b>							
BPA Other C&RD and CRC		\$31,645	\$31,645				
Distribution Efficiency Initiative		\$8,987	\$8,987				
DSM Direct Program Overhead		\$56,909	\$56,909				
Local Energy Efficiency Funds	1 projects	\$7,520.00	\$7,520.00	9,000	7	\$0.135	\$0.135
<b>Total Program Direct Expense</b>		<b>\$14,896,817</b>	<b>\$25,938,550</b>	<b>91,145,366</b>	<b>57,072</b>		
<b>Indirect Program Expense</b>		<b>\$765,561</b>					
<b>Total DSM Expense</b>		<b>\$15,662,378</b>					

(a) Levelized Costs are based on financial inputs from IPC's 2006 Integrated Resource Plan and calculations include line losses.

(b) The Total Utility Cost is all cost incurred by IPC to implement a DSM program.

(c) The Total Resource Cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.

(d) Summer Peak Demand is reported where program kW reduction is documented.

(1) Participant costs used to estimate Total Resource cost is estimated at 24% of Utility cost.

(2) Measure Life is weighted based on energy savings of custom option (15 years) and menu options (5 years).

(3) The kWh savings are preliminary estimates from NEEA. Total Resource costs include only Utility cost, which understates the actual total.

(4) Residential Education Initiative expenses in 2007 were allocated among all residential groups.

Appendix 4. 5-Year DSM Expense and Performance 2003-2007

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(e)</sup>		
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)	
<b>Demand Response</b>										
A/C Cool Credit										
2003	204	\$275,645	\$269,680		159	10				
2004	420	\$287,253	\$274,686		402	10				
2005	2,369	\$754,062	\$717,902		2,748	10				
2006	5,369	\$1,235,476	\$1,131,439		5,637	10				
2007	13,692	\$2,426,154	\$2,199,486		10,762	10				
<b>Total</b>	<b>N/A</b>	<b>\$4,978,589</b>	<b>\$4,593,193</b>		<b>N/A</b>	<b>10</b>				
<b>Irrigation Peak Rewards</b>										
2004	58	\$344,714	\$185,006		5,597	10				(1)
2005	894	\$1,468,282	\$479,484		40,323	10				(2)
2006	906	\$1,324,418	\$239,977		31,836	10				(3)
2007	947	\$1,615,881	\$239,855		37,441	10				(3)
<b>Total</b>	<b>N/A</b>	<b>\$4,753,295</b>	<b>\$1,144,322</b>		<b>N/A</b>	<b>10</b>				

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.  
 (1) Utility cost restated from \$320,309 in prior historical reporting to reflect all funding sources.  
 (2) Peak kW achieved based on mid-week load reduction schedule.  
 (3) Maximum summer peak kW achieved.

**Appendix 4. 5-Year DSM Expense and Performance 2003-2007 (continued)**

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Residential Efficiency</b>									
<b>Appliance Program</b>									
2007		\$9,275							
<b>Total</b>		<b>\$9,275</b>							
<b>Energy House Calls</b>									
2003	420	\$167,076	\$167,076	602,723	69	20	\$0.023	\$0.023	(4)
2004	1,708	\$725,981	\$725,981	2,349,783	268	20	\$0.025	\$0.025	(5)
2005	891	\$375,610	\$375,610	1,775,770	203	20	\$0.017	\$0.017	
2006	819	\$336,701	\$336,701	777,244	89	20	\$0.035	\$0.035	
2007	700	\$336,372	\$336,372	699,899	80	20	\$0.039	\$0.039	
<b>Total</b>	<b>4,538</b>	<b>\$1,941,740</b>	<b>\$1,941,740</b>	<b>6,205,419</b>	<b>708</b>	<b>20</b>	<b>\$0.026</b>	<b>\$0.026</b>	

- (a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.
- (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.
- (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.
- (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.
- (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.
- (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.
- (4) Utility cost restated from \$183,653 in prior historical reporting.
- (5) Utility cost restated from \$725,732 in prior historical reporting.

**Appendix 4. 5-Year DSM Expense and Performance 2003-2007 (continued)**

Program/Year	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>		
	Participants <sup>(b)</sup> (Number)	Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
2003	0	\$13,597	\$13,597		0				
2004	44	\$140,165	\$335,437	101,200	12	88	25	\$0.103	\$0.246
2005	200	\$253,105	\$315,311	415,600	47	400	25	\$0.045	\$0.056
2006	439	\$469,609	\$602,651	912,242	104	878	25	\$0.038	\$0.049
2007	303	\$475,044	\$566,247	629,634	72	606	25	\$0.056	\$0.067
<b>Total</b>	<b>986</b>	<b>\$1,351,520</b>	<b>\$1,833,243</b>	<b>2,058,676</b>	<b>235</b>	<b>1,972</b>	<b>25</b>	<b>\$0.049</b>	<b>\$0.066</b>

Residential Efficiency  
ENERGY STAR® Homes  
Northwest

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.  
 (g) Energy savings based on NEEA standardized per home kWh savings.  
 (h) Revised number of homes reported certified to 200 from 203 to align with incentives realized, adjusted.  
 (i) Utility costs and Total Resource costs are overstated by \$1,500 due to payment errors; savings and levelized cost have been adjusted to reflect certified homes only.

**Appendix 4. 5-Year DSM Expense and Performance 2003-2007 (continued)**

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (kW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Residential Efficiency</b>									
Oregon Weatherization (Schedule 78)									
2003	0	\$ (943)			0				(9)
2004	4	\$1,057	\$1,057	0	0				
2005	4	\$612	\$3,608	7,927	1	25	\$0.006	\$0.034	
2006	0	\$4,126	\$4,126		0				(10)
2007	1	\$3,781	\$5,589	9,971	1	25	\$0.028	\$0.042	
<b>Total</b>	<b>9</b>	<b>\$8,634</b>	<b>\$14,380</b>	<b>17,898</b>	<b>2</b>	<b>25</b>	<b>\$0.036</b>	<b>\$0.060</b>	<b>(11)</b>
<b>Rebate Advantage</b>									
2003	73	\$27,372	\$79,399	227,434	26	45	\$0.008	\$0.022	(12)
2004	105	\$52,187	\$178,712	332,567	38	45	\$0.010	\$0.034	
2005	98	\$46,173	\$158,462	312,311	36	45	\$0.009	\$0.032	
2006	102	\$52,673	\$140,289	333,494	38	45	\$0.010	\$0.027	
2007	123	\$89,269	\$182,152	554,018	63	45	\$0.010	\$0.021	
<b>Total</b>	<b>501</b>	<b>\$267,675</b>	<b>\$739,014</b>	<b>1,759,844</b>	<b>201</b>	<b>45</b>	<b>\$0.010</b>	<b>\$0.027</b>	

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.

(b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.

(c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.

(d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.

(e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.

(f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.

(g) Utility cost reflects collected funds on previous bad loan writeoffs.

(10) Utility cost reflects only audit and administration costs; there was no further activity in 2006.

(11) Levelized cost calculation includes bad loan writeoff expense and funds collected from loans previously written off.

(12) Utility cost restated from \$37,319 to reflect total expense.

Appendix 4. 5-Year DSM Expense and Performance 2003–2007 (continued)

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Residential Efficiency</b>									
Heating and Cooling Efficiency									
2006		\$17,444	\$17,444		0				
2007	4	\$488,211	\$494,989	1,595	0	18			
<b>Total</b>	<b>4</b>	<b>\$505,656</b>	<b>\$512,433</b>	<b>1,595</b>		<b>18</b>			
<b>ENERGY STAR® Lighting</b>									
2003	12,663	\$314,641	\$464,059	3,596,150	411	7	\$0.014	\$0.021	
2005	43,760	\$73,152	\$107,810	1,734,646	198	7	\$0.007	\$0.010	(13)
2006	178,514	\$298,754	\$539,877	6,302,794	719	7	\$0.008	\$0.014	
2007	219,739	\$557,646	\$668,756	7,207,439	823		\$0.012	\$0.015	
<b>Total</b>	<b>454,676</b>	<b>\$1,244,193</b>	<b>\$1,780,501</b>	<b>18,841,029</b>	<b>2,151</b>	<b>7</b>	<b>\$0.011</b>	<b>\$0.015</b>	
<b>Window A/C Trade-up Pilot</b>									
2003	99	\$6,687	\$10,492	14,454	2	12	\$0.051	\$0.079	
<b>Total</b>	<b>99</b>	<b>\$6,687</b>	<b>\$10,492</b>	<b>14,454</b>	<b>2</b>	<b>12</b>	<b>\$0.051</b>	<b>\$0.079</b>	

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.  
 (13) Energy savings adjusted for actual sales of 65,430 bulbs from 35,008, with measure life revised to 7 from 9 years.

**Appendix 4. 5-Year DSM Expense and Performance 2003-2007 (continued)**

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Weatherization Assistance for Qualified Customers (WAQC)</b>									
<b>WAQC—ID</b>									
2003	208	\$228,134	\$483,369		0		25	\$0.029	\$0.050
2004	269	\$498,474	\$859,482	1,271,677	145		25	\$0.033	\$0.045 (14)
2005	570	\$1,402,487	\$1,927,424	3,179,311	363		25	\$0.037	\$0.056
2006	540	\$1,455,373	\$2,231,086	2,958,024	338		25	\$0.029	\$0.040
2007	397	\$1,290,016	\$1,754,191	3,296,019	376		25	\$0.034	\$0.050
<b>Total</b>	<b>1,984</b>	<b>\$4,874,484</b>	<b>\$7,255,552</b>	<b>10,705,031</b>	<b>1,222</b>		<b>25</b>	<b>\$0.031</b>	<b>\$0.047</b>
<b>WAQC—OR</b>									
2003	29	\$22,255	\$42,335	102,643	12		25	\$0.016	\$0.031
2004	17	\$13,469	\$25,452	28,436	3		25	\$0.035	\$0.067
2005	28	\$44,348	\$59,443	94,279	11		25	\$0.035	\$0.047 (15)
2006	0	N/A	N/A	N/A	N/A		N/A	N/A	N/A
2007	11	\$33,607	\$44,613	42,108	5		25	\$0.059	\$0.079
<b>Total</b>	<b>85</b>	<b>\$110,766</b>	<b>\$168,930</b>	<b>267,466</b>	<b>31</b>		<b>25</b>	<b>\$0.031</b>	<b>\$0.047</b>

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.  
 (14) Total Resource Costs restated in 2005 to include federal funding administered by CAP agencies; 2003 savings not reported due to integration of fuel types.  
 (15) Beginning in 2005, BPA funds were no longer applied to CAP agency payments. BPA expense in subsequent years is reflected in the respective state expenses.

**Appendix 4. 5-Year DSM Expense and Performance 2003–2007 (continued)**

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (kW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Weatherization Assistance for Qualified Customers (WAQC)</b>									
<b>WAQC—BPA Supplemental</b>									
2003	57	\$49,895	\$106,915	223,591	26		25	\$0.017	\$0.036
2004	40	\$49,885	\$105,021	125,919	14		25	\$0.041	\$0.062
<b>Total</b>	<b>97</b>	<b>\$99,781</b>	<b>\$211,936</b>	<b>349,510</b>	<b>40</b>		<b>25</b>	<b>\$0.021</b>	<b>\$0.045</b>
<b>Commercial</b>									
<b>Air Care Plus Pilot</b>									
2003	4	\$5,764	\$9,061	33,976	4		10	\$0.021	\$0.033
2004	0	\$344	\$344						
<b>Total</b>	<b>4</b>	<b>\$6,108</b>	<b>\$9,405</b>	<b>33,976</b>	<b>4</b>		<b>10</b>	<b>\$0.022</b>	<b>\$0.034</b>
<b>Building Efficiency Program</b>									
2004	0	\$28,821	\$28,821						
2005	12	\$194,066	\$233,149	494,239	56	162	12	\$0.043	\$0.052
2006	40	\$374,008	\$463,770	704,541	80	338	12	\$0.058	\$0.072
2007	22	\$669,032	\$829,600	2,817,248	322	454	12	\$0.026	\$0.032
<b>Total</b>	<b>74</b>	<b>\$1,265,928</b>	<b>\$1,555,341</b>	<b>4,016,028</b>	<b>458</b>	<b>954</b>	<b>12</b>	<b>\$0.034</b>	<b>\$0.042</b>

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.

**Appendix 4. 5-Year DSM Expense and Performance 2003-2007 (continued)**

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Commercial</b>									
<b>Easy Upgrades</b>									
2006		\$31,819	\$31,819						
2007	104	\$711,494	\$1,882,035	5,183,640	592	780	12	\$0.015	\$0.040
<b>Total</b>	<b>104</b>	<b>\$743,313</b>	<b>\$1,913,854</b>	<b>5,183,640</b>	<b>592</b>	<b>780</b>	<b>12</b>	<b>\$0.015</b>	<b>\$0.040</b>
<b>Oregon Commercial Audits (Schedule 82)</b>									
2003	21		\$4,000						
2004	7								
2005	7	\$5,450	\$5,450						
2006	6								
2007	8	\$1,981	\$1,981						
<b>Total</b>	<b>49</b>	<b>\$7,431</b>	<b>\$11,431</b>						

(16)

- (a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.
- (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.
- (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.
- (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.
- (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.
- (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.
- (16) This is an Oregon statutory program. The company does not monitor customer implementation of audit recommendations and thus does not estimate savings for this program. Audit expense not involving outside contractor services are booked to general customer service. Six customer service audits were completed in 2006.

**Appendix 4. 5-Year DSM Expense and Performance 2003–2007 (continued)**

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs		Savings			Nominal Levelized Costs <sup>(a)</sup>		
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (kW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Commercial</b>									
Oregon School Efficiency									
2005	0	\$86	\$86						
2006	6	\$24,379	\$89,771	223,368	25	12	\$0.012	\$0.044	
<b>Total</b>	<b>6</b>	<b>\$24,465</b>	<b>\$89,858</b>	<b>223,368</b>	<b>25</b>	<b>12</b>	<b>\$0.012</b>	<b>\$0.044</b>	
<b>Industrial</b>									
Custom Efficiency									
2003		\$1,303	\$1,303		0				
2004	1	\$112,311	\$133,441	211,295	24	12	\$0.058	\$0.069	
2005	24	\$1,128,076	\$3,653,152	12,016,678	1,372	12	\$0.010	\$0.033	
2006	40	\$1,625,216	\$4,273,885	19,211,605	2,193	12	\$0.009	\$0.024	
2007	49	\$3,161,866	\$7,012,686	29,789,304	3,401	12	\$0.012	\$0.026	
<b>Total</b>	<b>114</b>	<b>\$6,028,771</b>	<b>\$15,074,467</b>	<b>61,228,862</b>	<b>6,990</b>	<b>12</b>	<b>\$0.011</b>	<b>\$0.027</b>	

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.  
 (17) Energy incentives of \$6,674 were paid for this program under the Easy Upgrades program..  
 (18) Originally reported expense and energy included accrued amounts, restated here to align with accounting records.

Appendix 4. 5-Year DSM Expense and Performance 2003-2007 (continued)

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Irrigation</b>									
Irrigation Efficiency Program									
2003	2	\$41,089	\$54,609	36,792		18	15	\$0.106	\$0.141 (19)
2004	33	\$120,808	\$402,978	802,812		449	15	\$0.014	\$0.048 (20)
2005	38	\$150,577	\$657,460	1,012,883		401	15	\$0.014	\$0.062
2006	559	\$2,779,620	\$8,514,231	16,986,008	1,939	5,100	8	\$0.024	\$0.073 (21)
2007	816	\$2,001,961	\$8,694,772	12,304,073	1,405	3,407	8	\$0.024	\$0.103
<b>Total</b>	<b>1,448</b>	<b>\$5,094,055</b>	<b>\$18,324,050</b>	<b>31,142,568</b>	<b>3,344</b>	<b>9,376</b>	<b>8</b>	<b>\$0.024</b>	<b>\$0.086</b>
<b>Other Programs</b>									
Building Operator Training									
2003	71	\$48,853	\$48,853	1,825,000	208		5	\$0.006	\$0.006 (22)
2004	26	\$43,969	\$43,969	650,000	74		5	\$0.014	\$0.014
2005	7	\$1,750	\$4,480	434,167	50		5	\$0.001	\$0.002
<b>Total</b>	<b>104</b>	<b>\$94,572</b>	<b>\$97,302</b>	<b>2,909,167</b>	<b>332</b>		<b>5</b>	<b>\$0.007</b>	<b>\$0.007</b>

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.  
 (19) Restated from \$11,190.  
 (20) Originally reported expense and energy included accrued amounts, restated here to align with accounting records.  
 (21) Measure Life is weighted life (based on energy savings) of custom option (15 years) and menu options (5 years).  
 (22) Originally reported expense and energy included accrued amounts; 2003 restated from \$36,084, 2004 restated from \$48,853.

**Appendix 4. 5-Year DSM Expense and Performance 2003–2007 (continued)**

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>		
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)	
<b>Other Programs</b>										
Commercial Education Initiative										
	2005	\$3,497	\$3,497							
	2006	\$4,663	\$4,663							
	2007	\$26,823	\$26,823							
	<b>Total</b>	<b>\$34,983</b>	<b>\$34,983</b>							
Distribution Efficiency Initiative										
	2005	\$21,552	\$43,969							
	2006	\$24,306	\$24,306							
	<b>Total</b>	<b>\$45,858</b>	<b>\$68,275</b>							
DSM Direct Program Overhead										
	2007	\$56,909								
	<b>Total</b>	<b>\$56,909</b>								

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.

**Appendix 4. 5-Year DSM Expense and Performance 2003-2007 (continued)**

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (kW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Other Programs</b>									
Other C&RD and CRC									
BPA									
	2003	\$67,012	\$67,012						
	2004	\$108,191	\$108,191						
	2005	\$101,177	\$101,177						
	2006	\$124,956	\$124,956						
	2007	\$31,845	\$31,845						
	<b>Total</b>	<b>\$432,981</b>	<b>\$432,981</b>						
<b>Residential Education Initiative</b>									
	2005	\$7,498	\$7,498						
	2006	\$56,727	\$56,727						
	<b>Total</b>	<b>\$64,225</b>	<b>\$64,225</b>						

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.

Appendix 4. 5-Year DSM Expense and Performance 2003–2007 (continued)

Program/Year	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>		
	Participants <sup>(b)</sup> (Number)	Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
2003	56	\$5,100	\$5,100						
2004	0	\$23,449	\$23,449						
2005	2	\$14,896	\$26,756	78,000	9		10	\$0.024	\$0.042
2006	480	\$3,459	\$3,459	19,027	2		7	\$0.009	\$0.009
2007	1	\$7,520	\$7,520	9,000	1		7	\$0.135	\$0.135
<b>Total</b>	<b>539</b>	<b>\$54,424</b>	<b>\$66,284</b>	<b>106,027</b>	<b>12</b>		<b>9</b>	<b>\$0.066</b>	<b>\$0.081</b>

Other Programs  
Local Energy Efficiency Funds

(23)

(24)

- (a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.
- (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.
- (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.
- (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.
- (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.
- (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.
- (23) Residential Education Initiative costs were allocated among all residential energy efficiency programs for 2007.
- (24) Levelized cost calculations based on direct program cost only (\$1,008) associated with special CFL tradeshow distribution.

Appendix 4. 5-Year DSM Expense and Performance 2003-2007 (continued)

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
<b>Market Transformation</b>									
NEEA									
2003		\$1,292,748	\$1,292,748	12,050,157	1,376				
2004		\$1,256,611	\$1,256,611	13,545,896	1,546				
2005		\$476,891	\$476,891	16,297,235	1,860				(25)
2006		\$930,455	\$930,455	22,337,477	2,550				(26)
2007		\$893,340	\$893,340	28,601,410	3,265				(26)
<b>Total</b>	<b>0</b>	<b>\$4,850,044</b>	<b>\$4,850,044</b>	<b>92,832,174</b>	<b>10,597</b>				
<b>Annual Totals</b>									
2003	0	\$2,566,229	\$3,119,609	18,712,919	2,132	189			
2004		\$3,807,688	\$4,688,637	19,419,605	2,125	6,536			
2005		\$6,523,349	\$9,358,620	37,853,046	4,205	44,034			
2006		\$11,174,181	\$19,761,633	70,765,825	8,078	43,790			
2007		\$14,896,816	\$25,938,550	91,143,761	10,404	57,072			
<b>Total Direct Program</b>	<b>0</b>	<b>\$38,968,263</b>	<b>\$62,867,049</b>	<b>237,895,156</b>	<b>27,157</b>	<b>151,621</b>			

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.  
 (25) Energy is restated from 2005 estimate of 20,053,756 kWh.  
 (26) Energy is a preliminary estimate.

**Appendix 4. 5-Year DSM Expense and Performance 2003-2007 (continued)**

Program/Year	Participants <sup>(b)</sup> (Number)	Total Costs			Savings			Nominal Levelized Costs <sup>(a)</sup>	
		Utility <sup>(c)</sup> (dollars)	Resource <sup>(d)</sup> (dollars)	Annual Energy (kWh)	Average Demand <sup>(e)</sup> (akW)	Peak Demand <sup>(f)</sup> (kW)	Measure Life (Years)	Total Utility (\$/kWh)	Total Resource (\$/kWh)
Indirect Program Expense									
DSM Overhead and Other Indirect									
	2003	\$78,526							(27)
	2004	\$148,610							(27)
	2005	\$177,624							
	2006	\$309,832							
	2007	\$765,561							
	<b>Total</b>	<b>0</b>	<b>\$1,480,153</b>						
<b>Total Expense</b>									
	2003		\$2,644,755						
	2004		\$3,956,299						
	2005		\$6,700,973						
	2006		\$11,484,013						
	2007		\$15,662,378						
	<b>Total 2003-2007</b>		<b>\$40,448,416</b>						

(a) Nominal levelized costs are based on financial inputs from IPC's 2006 integrated resource plan and calculations include line losses.  
 (b) Participant totals for energy efficiency programs are incremental. Totals for Demand Response programs reflect annual subscribers, which may represent the same participant across multiple years.  
 (c) The Total Utility cost is all cost incurred by IPC to implement a DSM program.  
 (d) The Total Resource cost is the total expenditure for a program from the point of view of IPC and its customers as a whole.  
 (e) Average Demand = Annual Energy / 8,760 annual hours, excluding irrigation demand reduction.  
 (f) Summer Peak Demand is reported where program kW reduction is documented. Reduction of kW from demand response is not additive.  
 (27) Analysis and indirect expenses were not segregated in the accounting for this reporting period.

**BEFORE THE**  
**IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-08-03**

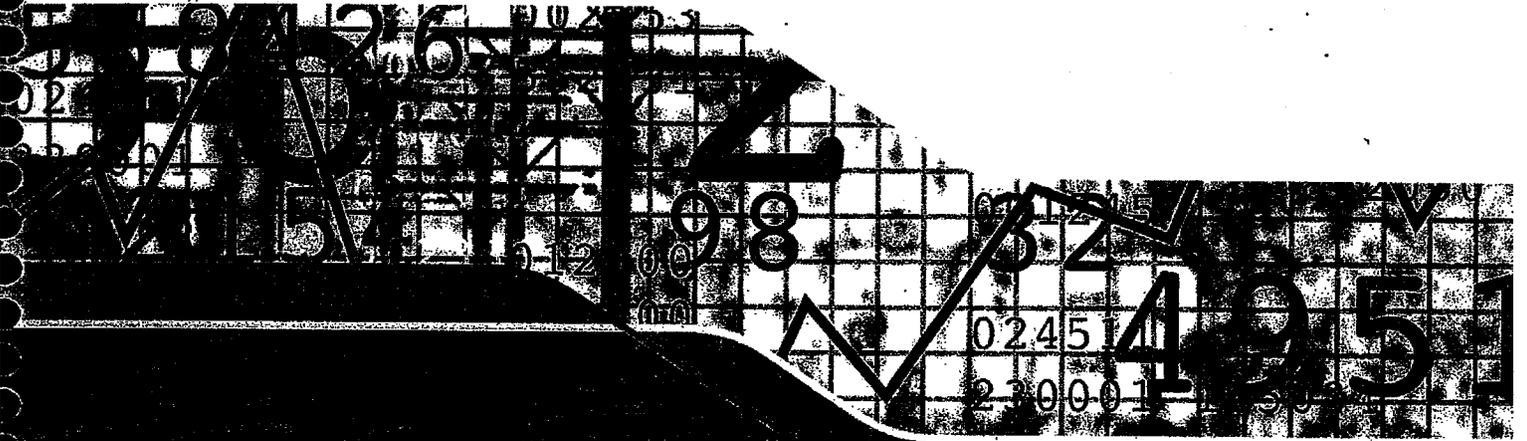
**IDAHO POWER COMPANY**

**EXHIBIT NO. 2**

**TIM TATUM**



*Appendix D-Technical Appendix  
For the 2006 Integrated Resource Plan*



## DSM Analysis and Screening Criteria

### DSM Program Development

In November 2004, Quantum Consulting of Berkeley, California, (now Itron Inc. of Oakland, California) completed a study for Idaho Power assessing the energy savings potential within the residential and commercial sectors. The study served as the basis for the residential and commercial retrofit program options analyzed in this IRP. The Company filed the Quantum study with the IPUC in December 2004 as an addendum to the 2004 IRP. In order to meet the guidelines of the 2006 IRP, the study output was later expanded with support from Quantum for program extension from 10 to 20 years of utility operation.

The assumptions and energy estimates that support the industrial efficiency program extension were developed internally by Idaho Power's engineering staff. The industrial program expansion and the residential and commercial retrofit program options were each designed to maximize the potential energy benefits of the resource while remaining cost-effective from a total resource perspective.

All DSM program options analyzed as part of the 2006 IRP included the following cost components:

- Administrative costs
- Marketing and advertising costs
- Incentive payments
- Participant costs

Once the program design and costing phase was completed, each new program was put through a series of static screening analyses prior to being introduced into the dynamic IRP portfolio analysis in Aurora.

### Screening Criteria

DSM screening criteria are designed to assess a program's potential to maximize benefits at the lowest cost for all stakeholders. In addition to the strategic criteria listed in Chapter 5 of the 2006 IRP Plan, key screening elements are:

- Programs will be **cost-effective**. From a total resource perspective, estimated program benefits must be greater than estimated program costs.
- Programs will be **customer-focused**. From the participants' perspective, programs will offer real benefits and value to customers. The Idaho Public Utilities Commission stated in Order No. 29026, "It is our hope that the programs created by the DSM rider will empower customers to exercise control over their energy consumption and reduce their bills."
- Programs will be **equitably distributed**. From the customers' perspective, programs will be selected to benefit all groups of customers. Over time, programs will be offered to customers in all sectors and in all regions of the company's service territory.
- Programs will be as close to **earnings-neutral** as possible. From the utility's perspective, programs will be selected to minimize the negative impact on shareowners.

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T.Tatum, IPC  
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These criteria are used as guidelines in selecting a new program or initiative. A program that doesn't meet all of these criteria is not excluded from consideration, but would have to be further evaluated for other valued characteristics. Ultimately, all programs must be cost-effective in order to be considered as ordered by the IPUC.<sup>1</sup>

## Static Cost-Effectiveness Analysis

The cost-effectiveness analysis is the primary focus of the screening criteria. The static cost-effectiveness analysis of DSM programs at Idaho Power is performed using the methods described in the EPRI End-Use Technical Assessment Guide Manual as well as The California Standard Practices Manual: Economic Analysis of Demand-side Programs and Projects.<sup>2</sup> The proposed DSM programs considered for inclusion into the 2006 IRP are evaluated from Utility Cost Test and Total Resource Cost test perspectives.

### Total Resource Cost Test (TRC)<sup>3</sup>

The TRC test is a measure of the total net resource expenditures of a DSM program from the point of view of the utility and its customers as a whole. Costs include changes in supply costs, utility costs, and participant costs. (Transfer payments between customers and the utility are ignored).

The following are the calculations performed by this test:

**Net Present Value:** A net present value of zero or greater indicates that the program is cost-effective from the total resource cost perspective.

**Benefits-Cost Ratio:** A benefit-cost ratio of 1.0 or greater indicates the program is cost-effective from the total resource cost perspective.

**Levelized Cost:** This measurement makes the evaluation of potential demand-side resources comparable to that of supply side resources. The cost stream of DSM resource (in this case, the stream of utility costs and participant costs) is discounted and then divided by the stream of discounted kW or kWh that is expected from the program.

### Utility Cost Test<sup>4</sup>

The Utility Cost test is a measure of the total costs to the utility to implement a DSM program.

<sup>1</sup> IPUC Order No. 29026, May 20, 2002

<sup>2</sup> [www.cpuc.ca.gov/static/energy/electric/energy+efficiency/rulemaking/std+practice+manual.doc](http://www.cpuc.ca.gov/static/energy/electric/energy+efficiency/rulemaking/std+practice+manual.doc)

<sup>3</sup> EPRI End-Use Technical Assessment Guide (End-Use TAG), Volume 4: Fundamentals and Methods, Barakat and Chamberlin, Inc, April 1991

<sup>4</sup> EPRI End-Use Technical Assessment Guide (End-Use TAG), Volume 4: Fundamentals and Methods, Barakat and Chamberlin, Inc, April 1991

The following are the calculations performed by this test:

**Net Present Value:** A net present value of zero or greater indicates that the program is cost-effective from the Utility Cost perspective.

**Benefits-Cost Ratio:** A benefit-cost ratio of 1.0 or greater indicates the program is cost-effective from the Utility Cost perspective.

**Levelized Cost:** This measurement attempts to put demand side resources on equal ground with supply-side resources. As with supply-side resources, the cost stream of DSM resource is discounted and then divided by the stream of kW and kWh that is expected from the program.

**Payback:** Number of years required for the energy benefits to equal the participants' costs for a program.

### DSM Analysis Calculation Definitions

**Net Present Value:** Calculated as the discounted stream of program benefits minus the discounted stream of program costs using the Company's weighted average cost of capital (WACC) for resource planning.

$$\sum_{T=1}^N \frac{\text{Program Benefits}}{(1+WACC)^{t-1}} \quad (\text{minus}) \quad \sum_{T=1}^N \frac{\text{Program Costs}}{(1+WACC)^{t-1}}$$

Where: N = the total number of years, t = the incremental year, and WACC = the Company's weighted average cost of capital.

**Benefits-Cost Ratio:** Calculated as the discounted stream of program benefits divided by the discounted stream of program costs.

$$\sum_{t=1}^N \frac{\text{Program Benefits}}{(1+WACC)^{t-1}} \quad \div \quad \sum_{t=1}^N \frac{\text{Program Costs}}{(1+WACC)^{t-1}}$$

**Levelized Costs:** The present value of total costs of the resource over the life of the program in the base year divided by the discounted stream of energy or demand savings, depending on how the resource size has been defined.

$$\sum_{T=1}^N \frac{\text{Program Costs}}{(1+WACC)^{t-1}} \quad \div \quad \sum_{T=1}^N \frac{\text{Energy Savings}}{(1+WACC)^{t-1}}$$

**Payback:** Number of years from the initial program participation to the point at which the cumulative benefits exceed the cumulative undiscounted costs for participants.

**Incremental Costs:** The additional cost incurred by choosing to select one option over another.

$$\begin{aligned} & \text{Total Installed Cost of Energy Efficient Option} \\ - & \text{Total Installed Cost of a Non-Energy Efficient Option} \\ & = \text{Incremental Cost} \end{aligned}$$

## Program Benefits Calculations

To quantify the "benefit" portion of the calculation five costing periods were created for the year that are consistent with the IPUC approved rate schedule 19 tariff rate pricing periods. Each costing period contains a price that reflects the alternative cost of energy and capacity at the associated time period. The alternative cost represents the cost of energy resources that would most likely be the alternative at that time period. Each time segment has a different alternative cost associated with it depending on the expected price for that period.

Two methodologies were developed, at the request of the IRPAC, to evaluate the potential benefits associated with alternative supply costs: peak oriented (gas turbine) and baseload oriented (thermal plant) resource alternatives.

The peak alternative resource methodology employs five costing periods for each year to reflect the market dynamics impacting costs associated with different times of the day or seasonally. Each costing period contains a price that reflects the alternative cost of energy and capacity at the associated time period. The alternative cost represents the cost of energy resources that would most likely be an alternative including peak plant or the market cost of energy depending upon the load profile associated with the program. Each time segment has a different alternative cost associated with it depending on the expected price for that period. The baseload alternative utilized the capacity and variable cost associated with a thermal (coal plant) alternative which applied to all hours of the year.

The results of the analyses showed all programs to be cost-effective under both the peak and the baseload alternative resource cost methodologies. All programs showed greater benefits associated using the peak resource alternative, however, the industrial efficiency program showed the highest benefits using the baseload analysis. This benefit differential is attributable to the unique seasonal load profiles associated with each program.

The following tables illustrate the time of day and time of year costing period definitions used in the peak static program screening analysis:

SUMMER SEASON June 1 through August 35								
Hour	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Holiday
1	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
2	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
3	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
4	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
5	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
6	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
7	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
8	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
9	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
10	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
11	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
12	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
13	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
14	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
15	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
16	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
17	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
18	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
19	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
20	SMP	SONP	SONP	SONP	SONP	SONP	SMP	SMP
21	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
22	SMP	SMP	SMP	SMP	SMP	SMP	SMP	SMP
23	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP
24	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP	SOFP

SOFP = Summer Off-Peak

SMP = Summer Mid-Peak

SONP = Summer On-Peak

NON-SUMMER SEASON September 01 through May 31								
Hour	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Holiday
1	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
2	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
3	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
4	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
5	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
6	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
7	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
8	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
9	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
10	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
11	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
12	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
13	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
14	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
15	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
16	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
17	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
18	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
19	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
20	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
21	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
22	NSOFP	NSMP	NSMP	NSMP	NSMP	NSMP	NSMP	NSOFP
23	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP
24	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP	NSOFP

NSOFP = Non-Summer Off-Peak

NSMP = Non-Summer Mid-Peak

Market prices were developed within Aurora using the Preferred Portfolio as a resource basis (May Aurora\_2006IRP\_P3\_hrly\_zone\_prices\_20yr So Idaho). The values beyond 20 years are extended by escalating the final year of the forward market price schedule for the additional years needed for the analysis using the Company’s escalation rate of 3.0% for capital investments.

The costing period prices are calculated using the following method:

- NSMP = Average of heavy load prices in January–May and September–December.
- NSOFP = Average of light load prices in January–May and September–December.
- SOFP = Average of light load prices in June–August.
- SMP = Average of heavy load prices in June–August.
- SONP = IPC variable energy and operating cost of a 162 MW Simple-Cycle Gas Turbine
- Annual = IPC variable energy and operating cost of thermal coal plant

The following table shows the schedule of variable and market alternative costs used to calculate the benefit value of each program in the static analysis:

Year	Alternative Energy Cost (\$/MWh)					
	IPC Variable Peak Cost	Seasonal Market Price Forecast				IPC Variable Base Load
		SONP	SMP	SOPF	NSMP	
1	\$91.08	\$68.57	\$51.54	\$77.61	\$65.59	\$15.93
2	\$95.30	\$69.89	\$51.61	\$78.95	\$65.64	\$15.91
3	\$88.97	\$65.98	\$48.07	\$68.96	\$55.61	\$15.80
4	\$88.12	\$66.39	\$48.52	\$68.15	\$55.39	\$15.80
5	\$67.14	\$50.43	\$37.03	\$52.75	\$42.31	\$15.27
6	\$67.81	\$55.93	\$41.28	\$54.30	\$42.99	\$15.43
7	\$68.94	\$67.85	\$50.72	\$64.61	\$51.51	\$31.14
8	\$71.25	\$71.71	\$54.18	\$68.18	\$54.33	\$31.84
9	\$73.30	\$74.02	\$56.01	\$70.06	\$56.05	\$32.88
10	\$75.73	\$78.45	\$59.19	\$74.07	\$59.74	\$33.43
11	\$78.91	\$82.40	\$62.08	\$78.96	\$63.83	\$34.43
12	\$82.37	\$90.38	\$66.94	\$86.37	\$69.54	\$35.34
13	\$85.26	\$92.36	\$70.70	\$90.27	\$72.64	\$36.43
14	\$89.35	\$98.01	\$75.25	\$95.24	\$76.92	\$37.61
15	\$92.64	\$102.92	\$79.15	\$100.11	\$80.34	\$38.67
16	\$86.04	\$97.28	\$75.60	\$94.42	\$76.63	\$39.40
17	\$89.19	\$104.05	\$80.51	\$101.25	\$81.28	\$40.54
18	\$93.13	\$108.84	\$84.94	\$105.87	\$85.53	\$41.53
19	\$95.86	\$114.48	\$90.26	\$111.23	\$90.19	\$42.77
20	\$99.47	\$120.35	\$96.05	\$118.21	\$95.55	\$44.00
21	\$93.36	\$123.96	\$98.93	\$121.75	\$98.42	\$45.23
22	\$97.22	\$127.68	\$101.90	\$125.40	\$101.37	\$49.65
23	\$100.74	\$131.51	\$104.95	\$129.17	\$104.41	\$51.20
24	\$104.46	\$135.46	\$108.10	\$133.04	\$107.55	\$52.82
25	\$108.97	\$139.52	\$111.35	\$137.03	\$110.77	\$54.49
26	\$110.64	\$143.71	\$114.69	\$141.14	\$114.10	\$57.01
27	\$112.32	\$148.02	\$118.13	\$145.38	\$117.52	\$58.85
28	\$114.01	\$152.46	\$121.67	\$149.74	\$121.04	\$60.75
29	\$115.71	\$157.03	\$125.32	\$154.23	\$124.68	\$62.79
30	\$117.42	\$161.74	\$129.08	\$158.86	\$128.42	\$64.84

Fixed plant costs were combined with the variable costs for developing total alternative costs. For the peak alternative, a 162MW Simple Cycle Combustion Turbine plant was used as the cost basis, for the baseload alternative, a coal thermal plant served as the cost basis. The levelized capacity cost factors applied were \$64.92/KW (peak) and \$247.52(baseload).

DSM program analysis includes the assumption that the energy savings will continue beyond the measure life time period for each program participant. This assumption is based on the principle that it is reasonable to assume that once a person participates in the program, they will not revert back to a less efficient behavior after the measure life expires. As a result, the energy savings schedule for each program shows a ramp-up period followed by a sustained maximum level for the entire analysis period. In the 2004 IRP the total period for analysis was 20 years. For the 2006 IRP this period was 30 years.

## Dynamic Modeling

The results of the levelized cost analysis showed that the proposed DSM programs had sufficiently lower costs than all but the geothermal supply-side resources. This result allowed the DSM portfolio to be included in the dynamic modeling (Aurora simulation model) as a fixed resource for all supply-side alternative portfolio analyses. This approach differs from the analysis in the 2004 IRP where the programs were introduced in an equivalent manner as were the supply-side resources to determine the beneficial impacts to the overall resource portfolio.

The following tables show the annual costs and energy savings associated with the DSM programs.

### Energy Savings MWh (Including Transmission Losses)

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	23,280	6,462	8,817	8,000
2008	64,753	20,639	24,451	19,663
2009	158,607	60,980	58,301	39,327
2010	244,160	99,554	85,615	58,990
2011	320,054	134,876	106,525	78,653
2012	387,019	165,874	122,828	98,316
2013	446,812	192,391	136,441	117,980
2014	499,130	214,746	146,741	137,643
2015	544,700	233,456	153,938	157,306
2016	585,249	249,083	159,197	176,970
2017	604,010	248,180	159,197	196,633
2018	624,520	248,987	159,237	216,296
2019	645,510	249,796	159,754	235,960
2020	666,299	250,483	160,193	255,623
2021	686,887	251,047	160,554	275,286
2022	707,270	251,486	160,835	294,949
2023	727,346	251,738	160,996	314,613
2024	747,319	251,926	161,116	334,276
2025	767,085	251,989	161,157	353,939
2026	786,749	251,989	161,157	373,603
2027	786,749	251,989	161,157	373,603
2028	786,749	251,989	161,157	373,603
2029	786,749	251,989	161,157	373,603
2030	786,749	251,989	161,157	373,603
2031	786,749	251,989	161,157	373,603
2032	786,749	251,989	161,157	373,603
2033	786,749	251,989	161,157	373,603
2034	786,749	251,989	161,157	373,603
2035	786,749	251,989	161,157	373,603
2036	786,749	251,989	161,157	373,603

**Average Peak Reduction  
aMW (Including Transmission Losses)**

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	2.7	0.7	1.0	0.9
2008	7.4	2.4	2.8	2.2
2009	18.1	7.0	6.7	4.5
2010	27.9	11.4	9.8	6.7
2011	36.5	15.4	12.2	9.0
2012	44.2	18.9	14.0	11.2
2013	51.0	22.0	15.6	13.5
2014	57.0	24.5	16.8	15.7
2015	62.2	26.7	17.6	18.0
2016	66.8	28.4	18.2	20.2
2017	69.0	28.3	18.2	22.4
2018	71.3	28.4	18.2	24.7
2019	73.7	28.5	18.2	26.9
2020	76.1	28.6	18.3	29.2
2021	78.4	28.7	18.3	31.4
2022	80.7	28.7	18.4	33.7
2023	83.0	28.7	18.4	35.9
2024	85.3	28.8	18.4	38.2
2025	87.6	28.8	18.4	40.4
2026	89.8	28.8	18.4	42.6
2027	89.8	28.8	18.4	42.6
2028	89.8	28.8	18.4	42.6
2029	89.8	28.8	18.4	42.6
2030	89.8	28.8	18.4	42.6
2031	89.8	28.8	18.4	42.6
2032	89.8	28.8	18.4	42.6
2033	89.8	28.8	18.4	42.6
2034	89.8	28.8	18.4	42.6
2035	89.8	28.8	18.4	42.6
2036	89.8	28.8	18.4	42.6

**July Peak Reduction  
MW (Including Transmission Losses)**

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	4.4	1.9	1.5	1.1
2008	15.8	9.1	4.1	2.6
2009	44.7	29.7	9.8	5.2
2010	70.6	48.3	14.4	7.9
2011	91.8	63.4	17.9	10.5
2012	110.4	76.6	20.7	13.1
2013	126.6	88.0	22.9	15.7
2014	140.5	97.5	24.7	18.3
2015	152.3	105.5	25.9	20.9
2016	162.5	112.2	26.8	23.6
2017	165.1	112.2	26.8	26.2
2018	167.7	112.1	26.8	28.8
2019	170.7	112.4	26.9	31.4
2020	173.6	112.6	26.9	34.0
2021	176.5	112.8	27.0	36.7
2022	179.2	112.9	27.0	39.3
2023	181.9	113.0	27.1	41.9
2024	184.6	113.0	27.1	44.5
2025	187.2	113.0	27.1	47.1
2026	189.9	113.0	27.1	49.8
2027	189.9	113.0	27.1	49.8
2028	189.9	113.0	27.1	49.8
2029	189.9	113.0	27.1	49.8
2030	189.9	113.0	27.1	49.8
2031	189.9	113.0	27.1	49.8
2032	189.9	113.0	27.1	49.8
2033	189.9	113.0	27.1	49.8
2034	189.9	113.0	27.1	49.8
2035	189.9	113.0	27.1	49.8
2036	189.9	113.0	27.1	49.8

**Utility Costs (Revised 10/12/06)  
(000s—Present Value)**

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	\$3,558	\$1,318	\$1,361	\$878
2008	\$5,995	\$2,664	\$1,958	\$1,374
2009	\$17,299	\$9,625	\$4,238	\$3,436
2010	\$16,581	\$9,327	\$3,983	\$3,271
2011	\$15,611	\$8,755	\$3,770	\$3,086
2012	\$14,486	\$7,936	\$3,639	\$2,911
2013	\$13,789	\$7,065	\$3,595	\$3,128
2014	\$12,218	\$6,236	\$3,033	\$2,949
2015	\$10,693	\$5,491	\$2,421	\$2,780
2016	\$9,895	\$4,846	\$2,115	\$2,934
2017	\$3,599	\$499	\$336	\$2,765
2018	\$3,377	\$480	\$291	\$2,606
2019	\$3,148	\$439	\$252	\$2,456
2020	\$3,174	\$401	\$219	\$2,555
2021	\$2,983	\$386	\$190	\$2,407
2022	\$2,784	\$351	\$164	\$2,268
2023	\$2,599	\$319	\$142	\$2,138
2024	\$2,427	\$288	\$123	\$2,016
2025	\$2,437	\$259	\$107	\$2,071
2026	\$2,276	\$231	\$93	\$1,952
<b>Total</b>	<b>\$148,928</b>	<b>\$66,917</b>	<b>\$32,030</b>	<b>\$49,981</b>

**Total Resource Cost (Revised 10/12/06)**  
**(000s--Present Value)**

Year	All Programs	Residential Retro	Commercial Retro	Industrial Expansion
2006				
2007	\$7,107	\$2,893	\$2,937	\$1,276
2008	\$14,434	\$5,075	\$4,249	\$5,110
2009	\$30,427	\$14,522	\$8,974	\$6,931
2010	\$28,266	\$14,009	\$7,718	\$6,539
2011	\$25,776	\$13,063	\$6,571	\$6,142
2012	\$23,307	\$11,747	\$5,791	\$5,769
2013	\$21,503	\$10,353	\$5,349	\$5,801
2014	\$18,834	\$9,032	\$4,353	\$5,448
2015	\$16,334	\$7,855	\$3,362	\$5,118
2016	\$14,775	\$6,841	\$2,814	\$5,120
2017	\$6,321	\$1,030	\$482	\$4,809
2018	\$5,791	\$876	\$398	\$4,517
2019	\$5,312	\$736	\$332	\$4,244
2020	\$5,127	\$622	\$279	\$4,226
2021	\$4,753	\$547	\$235	\$3,970
2022	\$4,401	\$471	\$200	\$3,730
2023	\$4,083	\$408	\$171	\$3,505
2024	\$3,798	\$357	\$146	\$3,294
2025	\$3,707	\$314	\$126	\$3,267
2026	\$3,455	\$277	\$108	\$3,070
<b>Total</b>	<b>\$247,510</b>	<b>\$101,028</b>	<b>\$54,597</b>	<b>\$91,885</b>

**DSM Portfolio Options--2006 IRP (Revised 10/12/06)**

	Savings *		Present Value Costs (000s)		Levelized Costs		B/C Ratio		Payback **	
	aMW	Summer Peak MW	Annual Energy MWh	Utility Cost	TRC Cost	UC (\$/kWh)	TRC (\$/kWh)	UC		TRC
Residential Existing	28.8	113.0	251,989	\$66,917	\$101,028	\$0.029	\$0.044	3.7	2.5	3.0
Commercial Existing	18.4	27.1	161,157	\$32,030	\$54,597	\$0.020	\$0.035	5.2	3.0	3.4
Industrial Expansion	40.4	47.1	353,939	\$49,981	\$91,885	\$0.022	\$0.040	5.1	2.8	3.4
<b>Total</b>	<b>87.6</b>	<b>187.2</b>	<b>767,085</b>	<b>\$148,928</b>	<b>\$247,510</b>					

\* Based on Cumulative Savings in 2025

\*\* Based on December 2005 Rate Schedule

**BEFORE THE**  
**IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-08-03**

**IDAHO POWER COMPANY**

**EXHIBIT NO. 3**

**TIM TATUM**

**Idaho Power Company  
Energy Efficiency Rider Account Projections**

**Table I  
Projected DSM Expenditures  
2008 - 2010**

	<u>2008</u>	<u>2009</u>	<u>2010</u>
Residential	\$ 6,701,164	\$ 4,092,940	\$ 4,581,842
Commercial/Industrial	6,875,972	7,255,894	7,184,421
Irrigation	3,364,520	3,934,655	3,480,362
Other	2,351,627	1,503,627	1,782,112
<b>Total DSM Expenditures</b>	<b>\$ 19,293,284</b>	<b>\$ 16,787,116</b>	<b>\$ 17,028,738</b>

**Table II  
Projected Year-End Energy Efficiency Rider Account Balances  
2008 - 2010**

*(At 2.5% **Including** Ongoing DSM Labor and Administrative Costs in 2009 and 2010)*

	<u>2008</u>	<u>2009</u>	<u>2010</u>
Beginning Balance	\$ (1,483,075)	\$ 4,583,626	\$ 4,441,793
DSM Expenditures	19,293,284	16,787,116	17,028,738
Funding Forecast	(13,226,583)	(16,928,949)	(17,275,217)
<b>Ending Balance</b>	<b>\$ 4,583,626</b>	<b>4,441,793</b>	<b>4,195,314</b>

**Table III  
Projected Year-End Energy Efficiency Rider Account Balances  
2008 - 2010**

*(At 2.5% **Excluding** Ongoing DSM Labor and Administrative Costs in 2009 and 2010)*

	<u>2008</u>	<u>2009</u>	<u>2010</u>
Beginning Balance	\$ (1,483,075)	\$ 4,583,626	\$ 1,209,934
DSM Expenditures	19,293,284	13,555,257	13,545,723
Funding Forecast	(13,226,583)	(16,928,949)	(17,275,217)
<b>Ending Balance</b>	<b>\$ 4,583,626</b>	<b>1,209,934</b>	<b>(2,519,560)</b>

**BEFORE THE**  
**IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-08-03**

**IDAHO POWER COMPANY**

**EXHIBIT NO. 4**

**TIM TATUM**

Idaho Power Company

Energy Efficiency Rider Funding Projection 2008 - 2010

2.5 % of Base Revenue Effective June 1, 2008

	2008			2009			2010		
	Escalated 2007 Test Year Revenue *	Rider Funding	Effective Funding Percentage	Escalated 2007 Test Year Revenue *	Rider Funding	Effective Funding Percentage	Escalated 2007 Test Year Revenue *	Rider Funding	Effective Funding Percentage
<b>Major Customer Classes</b>									
Residential	\$ 314,375,834	\$ 6,123,677	2.03%	\$ 319,720,224	\$ 7,993,006	2.50%	\$ 325,794,908	\$ 8,144,873	2.50%
Commercial	\$ 172,578,831	3,484,036	2.11%	\$ 177,583,617	4,439,590	2.50%	\$ 182,555,959	4,563,899	2.50%
Industrial	\$ 71,264,127	1,377,973	2.11%	\$ 73,116,994	1,827,925	2.50%	\$ 75,018,036	1,875,451	2.50%
Irrigation	\$ 74,751,052	1,640,948	2.30%	\$ 74,900,554	1,872,514	2.50%	\$ 74,975,455	1,874,386	2.50%
<b>Total Standard Tariff Rates</b>	<b>\$ 632,969,845</b>	<b>\$ 12,626,633</b>	<b>2.09%</b>	<b>\$ 645,321,389</b>	<b>\$ 16,133,035</b>	<b>2.50%</b>	<b>\$ 658,344,357</b>	<b>\$ 16,458,609</b>	<b>2.50%</b>
<b>Special Contracts</b>									
Micron	\$ 20,164,561	\$ 389,849	2.09%	\$ 20,688,839	\$ 517,221	2.50%	\$ 21,226,749	\$ 530,669	2.50%
Simplet	\$ 5,039,358	97,082	2.08%	\$ 5,170,381	129,260	2.50%	\$ 5,304,811	132,620	2.50%
Dept. of Energy	\$ 5,825,863	113,018	2.05%	\$ 5,977,335	149,433	2.50%	\$ 6,132,746	153,319	2.50%
<b>Total Special Contracts</b>	<b>31,029,782</b>	<b>599,949</b>	<b>2.08%</b>	<b>31,836,556</b>	<b>795,914</b>	<b>2.50%</b>	<b>32,664,306</b>	<b>816,608</b>	<b>2.50%</b>
<b>Total Base Revenue</b>	<b>\$ 663,999,626</b>	<b>\$ 13,226,583</b>	<b>2.09%</b>	<b>\$ 677,157,945</b>	<b>\$ 16,928,949</b>	<b>2.50%</b>	<b>\$ 691,008,663</b>	<b>\$ 17,275,217</b>	<b>2.50%</b>

Notes:

(\*) The base revenue projections for 2008 - 2010 were developed by escalating the 2007 test year revenues (Case No. IPC-E-07-08, Order No. 30508) for each class by the respective energy sales growth forecast from the Sales and Load Forecast for the 2006 IRP (Appendix A - Sales and Load Forecast, Pages 26-32).

**BEFORE THE**  
**IDAHO PUBLIC UTILITIES COMMISSION**

**CASE NO. IPC-E-08-03**

**IDAHO POWER COMPANY**

**EXHIBIT NO. 5**

**TIM TATUM**

SCHEDULE 91  
ENERGY EFFICIENCY RIDER

APPLICABILITY

This schedule is applicable to all retail Customers served under the Company's schedules and special contracts. This Energy Efficiency Rider is designed to fund the Company's expenditures for the analysis and implementation of programs and initiatives that promote energy conservation, and demand response programs and renewable energy options.

MONTHLY CHARGE

The Monthly Charge is equal to the applicable Energy Efficiency Rider percentage times the sum of the monthly billed charges for the base rate components. ~~The Monthly Charge will be separately stated on the Customer's regular billing.~~

<u>Schedule</u>	<u>Energy Efficiency Rider</u>
Schedule 1	<del>1.52.5 %</del> , but not to exceed \$1.75 per meter per month
Schedule 4	<del>1.52.5 %</del> , but not to exceed \$1.75 per meter per month
Schedule 5	<del>1.52.5 %</del> , but not to exceed \$1.75 per meter per month
Schedule 7	<del>1.52.5 %</del>
Schedule 9	<del>1.52.5 %</del>
Schedule 15	<del>1.52.5 %</del>
Schedule 19	<del>1.52.5 %</del>
Schedule 24	<del>1.52.5 %</del> , but not to exceed \$50.00 per meter per month
Schedule 39	<del>1.52.5 %</del>
Schedule 40	<del>1.52.5 %</del>
Schedule 41	<del>1.52.5 %</del>
Schedule 42	<del>1.52.5 %</del>
Schedule 26	<del>1.52.5 %</del>
Schedule 29	<del>1.52.5 %</del>
Schedule 30	<del>1.52.5 %</del>