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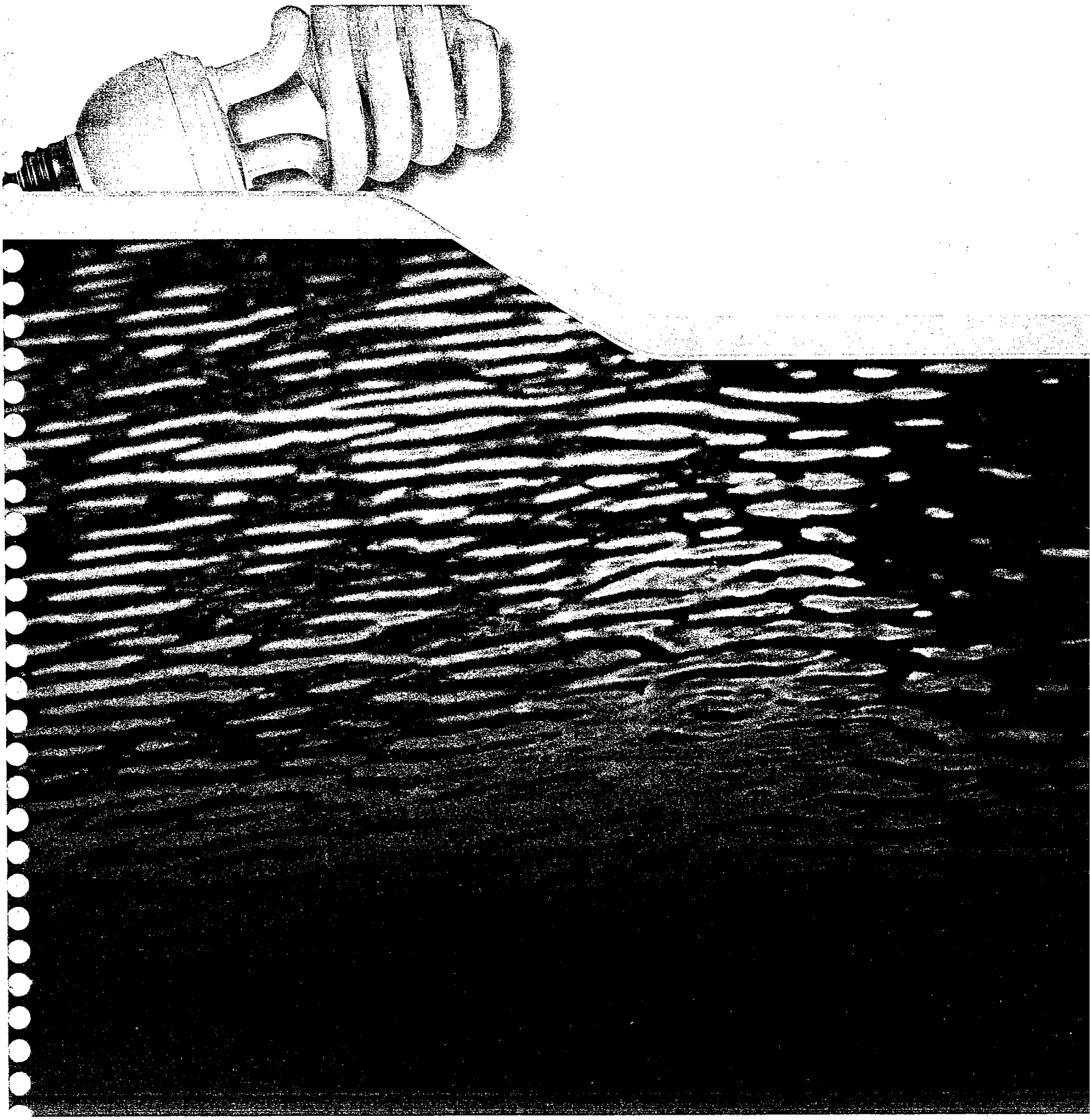

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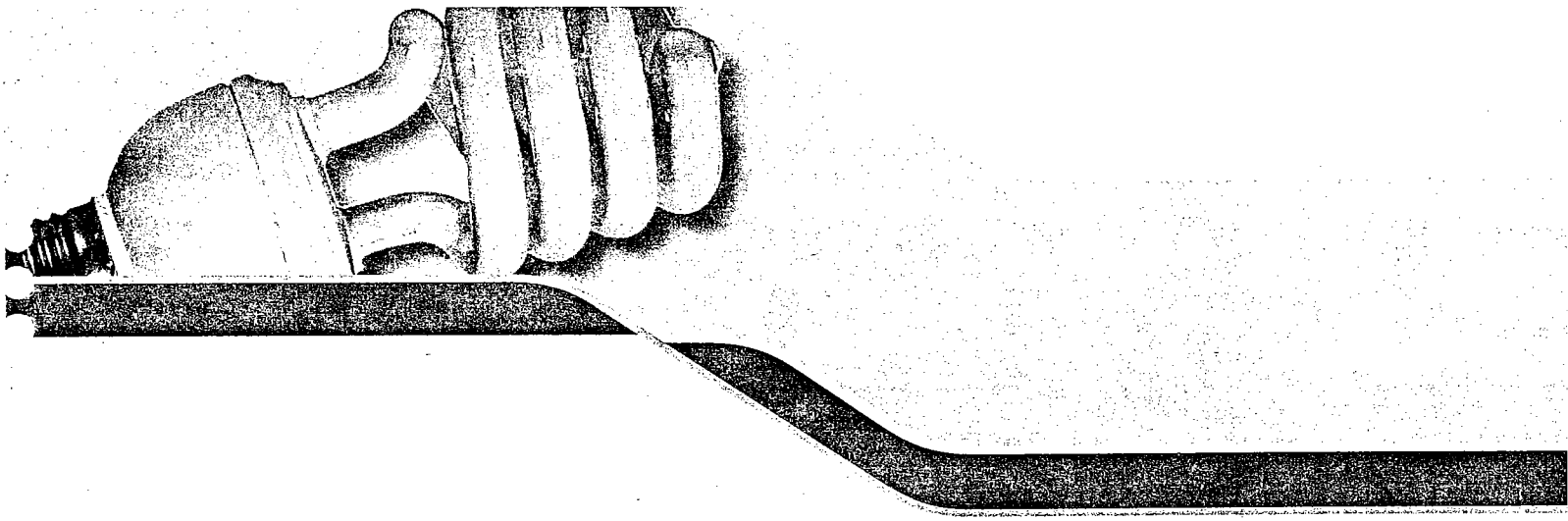
Demand-Side Management 2005 Annual Report



March 15, 2006

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Demand-Side Management 2005 Annual Report

March 15, 2006

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GLOSSARY OF TERMS

A/C—Air Conditioning

Alliance—Northwest Energy Efficiency Alliance

AMR—Advanced Meter Reading

BETC—Business Energy Tax Credit

BPA—Bonneville Power Administration

CAP—Community Action Partnership

C&RD—Conservation and Renewable Discount Program

CFL—Compact Fluorescent Lamp

CRC—Conservation Rate Credit

DSM—Demand-Side Management

EEAG—Energy Efficiency Advisory Group

HVAC—Heating Ventilation and Air Conditioning

HVR—Home Voltage Regulator

IED—Idaho Energy Division

IPC—Idaho Power Company

IPUC—Idaho Public Utilities Commission

IRP—Integrated Resource Plan

kW—Kilowatt

kWh—Kilowatt-hour

LIWA—Low Income Weatherization Assistance

MW—Megawatt

MWa—Megawatt average

MWh—Megawatt-hour

NEEM—Northwest Energy Efficiency Manufactured Homes

O&M—Operations and Maintenance

ODOE—Oregon Department of Energy

OPUC—Oregon Public Utility Commission

PTCS—Performance Tested Comfort Systems

Rider—Energy Efficiency Rider

V—Volt

EXECUTIVE SUMMARY

Idaho Power Company (IPC) develops and implements programs to help manage energy demand. The two primary objectives of these Demand-Side Management (DSM) programs are to:

- Acquire cost-effective resources in order to more efficiently meet the electrical systems needs, and to
- Provide Idaho Power customers with programs and information to help them manage their energy and demand use and lower their bills.

Idaho Power achieves these objectives through the development and implementation of programs with specific energy, economic, and customer objectives. Under the DSM umbrella, these programs fall into four categories: Demand Response, Energy Efficiency, Market Transformation, and Other Programs and Activities.

Idaho Power relies on the input from the Energy Efficiency Advisory Group (EEAG) to provide customer and public interest review of DSM programs. Formed in 2002 and meeting several times annually, the EEAG currently consists of 12 members representing a cross-section of customer segments including residential, industrial, commercial, irrigation, elderly, low-income, and environmental interests as well as members representing the Public Utility Commissions of Idaho and Oregon and Idaho Power. In addition to the EEAG, Idaho Power solicits further customer input through stakeholder groups in the industrial, irrigation, and commercial customer segments.

During 2005, the Idaho Public Utilities Commission (IPUC) approved Idaho Power's request (Case No. IPC-E-04-29) to increase the Energy Efficiency Rider (Idaho Rider) from 0.5% to 1.5% of base rate revenues. This funding increase became effective on June 1, 2005. In July 2005, Idaho Power filed a request with the Oregon Public Utility Commission (OPUC) to implement an Energy Efficiency Rider (Oregon Rider) identical to that approved in Idaho in the Oregon service area. The OPUC approved Idaho Power's request in August 2005. Since that time, Idaho Power has received approval from the OPUC to implement the Industrial Efficiency, Oregon School Efficiency, Irrigation Peak Rewards, Irrigation Efficiency Rewards, and Commercial Building Efficiency programs in Oregon.

The year 2005 marked the first year of a renewal agreement to fund the Northwest Energy Efficiency Alliance (Alliance) for the next five years (2005–2009). The Alliance's efforts in the Pacific Northwest impact Idaho Power's customers by providing behind-the-scenes market changes as well as structural support to Idaho Power local Market Transformation programs. Idaho Power continues to leverage the support provided by the Alliance in the development and marketing of local programs, resulting in efficiencies of program implementation.

In October 2005, Idaho Power began its fifth year of a five-year agreement with the Bonneville Power Administration (BPA) through the Conservation and Renewable Discount (C&RD) program. Idaho Power operates several programs with the C&RD funding including Energy House Calls and Rebate Advantage. The BPA has introduced a replacement program called the Conservation Rate Credit (CRC) program available from 2007–2009 and Idaho Power will be eligible for early participation.

Program Performance

In 2005, DSM programs at Idaho Power continued to grow and to show steady improvement in customer satisfaction. The six programs identified for implementation in the 2004 Integrated Resource Plan (IRP) were in

place and operating by the end of 2005. The two Demand Response programs, Irrigation Peak Rewards and A/C Cool Credit, resulted in a reduction of summer peak demand of over 43 MW. The four Energy Efficiency programs, Industrial Efficiency, Commercial Building Efficiency, ENERGY STAR® Homes Northwest, and Irrigation Efficiency Rewards, resulted in annual savings of 13,946 MWh.

In addition to the IRP programs, during 2005 Idaho Power operated several other Energy Efficiency programs targeting residential customers: Weatherization Assistance for Qualified Customers (previously known as Low Income Weatherization Assistance program, or LIWA), Energy House Calls, Rebate Advantage, and Oregon Residential Weatherization. And, in late summer, Idaho Power decided to join the regional Savings with a Twist program, sponsored by BPA, to provide Idaho Power customers with low-priced compact fluorescent light (CFL) bulbs in local retail stores. These five residential energy efficiency programs added savings of 6,756 annual MWh in 2005.

Idaho Power continues to realize significant Market Transformation benefits through Idaho Power's partnership with the Alliance, who estimates 20,054 annual MWh were saved in Idaho Power's service area in 2005.

Finally, Idaho Power was able to participate in a few small demonstration projects and education opportunities with an estimated 512 annual MWh savings.

Table 1 shows the 2005 annual energy savings or summer peak reduction associated with each of the DSM program categories. The energy impact totals 41,267 MWh of energy savings and 43 MW of summer peak demand reduction. Note that, unless otherwise noted, all energy statistics presented in this report are net of transmission line losses. Also, free rider impact has been included when a formal program evaluation was conducted, or when regional deemed savings values were used.

Table 1. 2005 DSM Energy Impact

	MWh	Peak MW
Demand Response		43
Energy Efficiency	20,702	
Market Transformation	20,054	
Other Programs and Activities	512	
Total 2005	**41,267**	**43**

DSM Expenditures and Funding

Funding for DSM programs comes from the Idaho Rider, Oregon Rider, BPA C&RD program, and Idaho Power's base rates. The total DSM expenses from these sources, including costs for administration and overhead, were over $6.7 million in 2005.

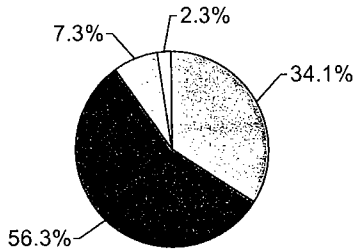
Table 2 provides a breakout of the 2005 expenses for the major funding and expense categories.

Table 2. 2005 DSM Expenses and Energy Impact

	Expenses	MWh Savings
Idaho Rider Funded	$4,533,878	34,034
Oregon Rider Funded	$31,473	1,008
BPA Funded	$612,486	2,259
Other DSM O&M	$1,523,136	3,967
Total 2005	**$6,700,973**	**41,267**

Another way to view the 2005 DSM program expenditures is to look at direct program expenses versus non-direct program expenditures. Direct program expenses include customer incentives and direct administration costs. Non-direct program expenses include administrative costs not directly attributable to a program. Figure 1 shows direct program expenditures by program categories: Demand Response, Energy Efficiency, Market Transformation, and Other Programs and Activities.

Figure 1. 2005 Program Expense



Demand Response	$2,222,344
Energy Efficiency	$3,673,744
Market Transformation	$476,891
Other Programs and Activities	$150,370
Total Direct Program Expense	**$6,523,349**
Administration and Overhead	$177,624
Total 2005	**$6,700,973**

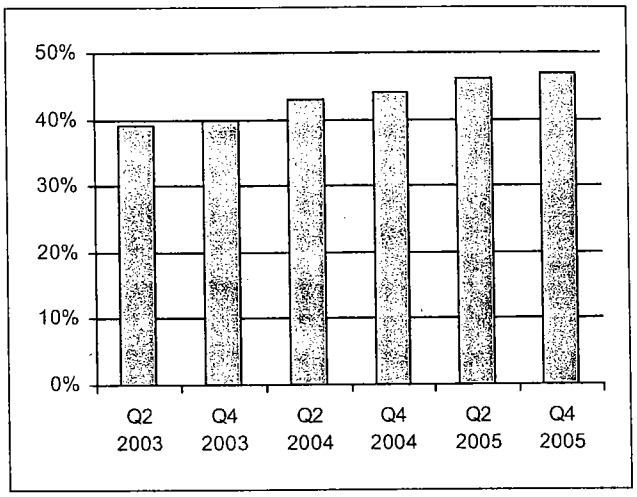
Customer Satisfaction

Customer satisfaction is an important element of the DSM programs at Idaho Power. Customer input from a variety of sources, including the company's customer satisfaction surveys, helps to shape program structure and marketing strategy. Recent survey results show steady improvement across years in the percent of customers whose needs are met with energy conservation.

Figure 2 shows the bi-quarterly growth in the number of customers indicating their needs are met or exceeded regarding Idaho Power's encouraging energy conservation with Idaho Power customers.

As Figure 2 shows, customers' positive perception of Idaho Power's conservation efforts has increased by over 20% since 2003.

Figure 2. Customers' Perception of IPC Conservation Efforts



The report's presentation outline is structured around each of the functional DSM areas (Demand Response, Energy Efficiency, Market Transformation, and Other Programs and Activities). Within each functional area, where more than one customer segment is served, the programs are segregated by the customer segments (residential, commercial, industrial, and irrigation), respectively.

The program write-ups are presented with an overview of operations and results, including highlights for the year, customer participation and satisfaction, energy/demand impact, and plans for 2006. Please note that energy and expense data have been rounded to the nearest whole unit.

The appendices following the program discussion provide additional detailed program activity and performance data.

This DSM Annual Report has been prepared in response to the IPUC's Order No. 29419 and in response to the OPUC's Order No. 89-507.

Demand Response Programs

DSM Demand Response initiatives are designed to use control devices to provide a means by which the operation of a consumer's end-use equipment may be modified to alter the maximum demand. The goal of DSM Demand Response at Idaho Power is to reduce the summer peak demand periods and thus minimize the need for providing higher cost supply-side alternatives such as gas turbine generation or open market electricity purchases.

The Demand Response programs at Idaho Power are comprised of A/C Cool Credit and Irrigation Peak Rewards. These two programs have their genesis in the 2002 and 2004 IRP efforts in which future peak summer resource deficiencies were identified.

In developing effective programs for reducing peak summer demand, Idaho Power targeted irrigation customers using high horsepower pumps and residential customers using central air conditioning. Both of these customer segments are characterized by large summer use, and together represent approximately 60% of peak summer demand.

The unique aspect of these programs is found in the ability to ensure load reduction through time-related mechanical controls.

In the case of irrigation, control is achieved through the use of programmed timers to switch irrigation pumps off at predetermined times.

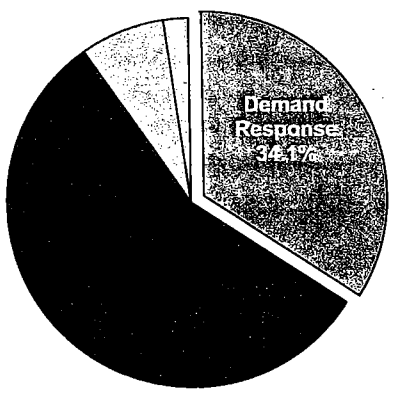
Residential air conditioning units are dynamically controlled through wireless communication to specifically addressed air conditioning compressor switches, capable of cycling each unit off at the appropriate time.

Both programs have proven successful and are continuing to evolve and increase the number of participants. Irrigation Peak Rewards is adding new customers in Idaho and is looking forward to its first Oregon customer in 2006. A/C Cool Credit completed its first full year of a five-year implementation ramp in 2005.

The following pages provide a detailed description of the programs' 2005 operations, results, and general plans for 2006.

Figure 3 provides a breakout of 2005 expenses and the relative ranking for these programs as a percentage of the total DSM expense.

Figure 3. Demand Response 2005 Program Expense



Demand Response Programs	Expense	% of All DSM
A/C Cool Credit	$754,062	11.6%
Irrigation Peak Rewards	$1,468,282	22.5%
Total	**$2,222,344**	**34.1%**

Demand Response	34.1%
Energy Efficiency	56.3%
Market Transformation	7.3%
Other Programs and Activities	2.3%

DEMAND RESPONSE

A/C Cool Credit

Program Overview

Customer Segment	Residential
Target Customers	Air conditioned housing units in Ada and Canyon counties, and Emmett Valley, Idaho
Program Life	March 2003–Ongoing
Program Manager	Celeste Becia

Summary 2005

Participation	2,369 air conditioning units
Total Utility Costs	$754,062
Idaho Rider	$718,066
IPC O&M	$35,996
Savings in kW	2,748

Description

A/C Cool Credit is a voluntary program for residential customers. The program enables Idaho Power to directly address summer peaking requirements by reducing air conditioning load demand at critical high demand periods in the summer. Presently, the program is available only in Idaho.

Control of the air conditioning units is achieved through the installation of individual radio-controlled switches on customer equipment and is cycled on and off using a predetermined schedule.

After two summers of pilot operations, Idaho Power completed the first year of full operational implementation of radio-controlled switches in 2005 in Ada and Canyon counties in Idaho. The program will be fully implemented in 2009. The year 2005 also marked the inception of a pilot program using power line carrier communications for direct load control participants in the Emmett Valley (Emmett) region of Idaho.

Results

2005 Highlights

- Implementation of the program name change from "A/C Cool Comfort" to "A/C Cool Credit" in order to emphasize the incentive attribute of the program.

- Developed new partnerships with subcontractors to accommodate program growth and to improve productivity.

- Integrated the program into existing customer billing and service systems and departments by making modifications to the Idaho Power Customer Information System, Advanced Meter Reading (AMR) system, and the corporate data warehouse. Software was modified and processes developed to enable timely, secure, and regular data transfer between these systems and the central program database maintained by the company's equipment installation vendor, Honeywell Utility Solutions.

- Customer service was also fully integrated with Honeywell's telephone desk; customer service representatives from both Idaho Power and Honeywell Utility Solutions were trained to be knowledgeable regarding program details, direct phone transfer capability, and notification of all cycling events.

- Twenty load control events were initiated between June 15 and August 19, 2005.

Participation

Overall marketing results were above typical response rates for this type of program. The response rate in the Treasure Valley was 7.8%, which was similar to results obtained in the 2004 pilot program. The response rate for Emmett was somewhat lower at 5.0%.

Total installations as of August 25, 2005 were 2,369. Of this total, 170 installations were for customers in Emmett utilizing the AMR system.

Demand Impact

The demand effects of this program have been relatively stable over the past two years. On average, Idaho Power can expect 1.16 kW demand reduction per participating household per hour over the course of a cycling event.

Aside from significant per-unit peak impact, the energy impact of cycling is relatively small. Analysis shows that kWh decreases, on average, by 1.97 kWh per participant, due to cycling. Thus, cycling appears to shift some usage from cycling hours to non-cycling hours as expected. The net effect on kWh clearly depends upon the cycling percentage and the outside temperature during the control event.

An issue of note occurred in November 2005 when it was discovered that the switch for cycling the air conditioning units had been installed using the low-voltage rather than the high-voltage connection to the switches originally planned for; however, the change was not conveyed to the operations and monitoring team. Thus, during operation, the system "heartbeat" signal from the cycling apparatus was falsely indicating to the Idaho Power operations team that the system was operational.

The result of this issue was that all customer units using the AMR equipment were not cycled during the 2005 cooling season. Upon discovery, of the wiring method, Idaho Power re-programmed the system software to recognize the low-voltage side and make the units operational.

Customer Satisfaction

Installations began in May, coinciding with the onset of direct mail campaigns. Rates were approximately 5%. A follow-up reminder was sent to about half of the previously targeted group. This second solicitation generated a very large response that boosted overall rates to 9% by late June.

By July 20 it was apparent that a large backlog of installations remained. On July 22, a letter was sent to all customers waiting for installation explaining the backlog and confirming installation within the month of August.

In order to better manage the high response rates, Idaho Power has developed an enhanced Customer Service Plan to aid in ensuring that customer expectations and the processes for servicing the customer are in place. The Plan focuses on communication and it includes 24 hour access for customers.

Plan for 2006

The A/C Cool Credit program matured significantly in 2005, as many manual processes were automated, marketing messages were refined, and error checking was strengthened.

As a result, installation plans for 2006 are being revised to accelerate the previously planned target of 2,000 additional installations. The new target range is 5,000–8,000 additional installations.

Obtaining adequate control equipment, implementing timely marketing campaigns, and refining installation and customer care procedures are critical yet attainable tasks that Idaho Power is committed to in meeting the demand reduction goals of this program.

DEMAND RESPONSE

Irrigation Peak Rewards

Program Overview

Customer Segment	Irrigation
Target Customers	Irrigation customers with 100+ HP irrigation systems
Program Life	January 2004—Ongoing
Program Manager	Quentin Nesbitt

Summary 2005

Participation	894 service points
Total Utility Costs	$1,468,282
Idaho Rider	$1,435,581
IPC O&M	$32,700
Savings in kW	40,323

Description

The Irrigation Peak Rewards program was developed as a pilot program in the summer of 2004 and expanded to a system-wide program in late 2005. The program was developed after selection through the 2004 IRP process.

The voluntary program targets irrigation customers with pumps of 100 horsepower or greater with an objective of reducing peak electrical load during summer weekday afternoons by providing control over load demand.

The program utilizes electronic time-activated switches to turn off pumps of participating irrigation customers during predetermined intervals.

Voluntary participants select one of three different interruption options for the months of June, July, and August. A demand credit incentive from Idaho Power is associated with each of the options. Electronic timers are programmed to turn off irrigation pumps during predetermined time periods associated with the chosen option. The following demand credit options and associated demand credit incentives were available to customers for 2005:

- One weekday per week, 4 p.m.–8 p.m. $2.01 per kW demand.
- Two weekdays per week, 4 p.m.–8 p.m. $2.52 per kW demand.
- Three weekdays per week, 4 p.m.–8 p.m. $2.76 per kW demand.

The incentive amount credited to customers is calculated for each metered service point and the credit applied to monthly billing.

Results

2005 Highlights

- Successful region-wide implementation occurred following the pilot program.
- Approval for operation in Oregon in fall 2005.
- Peak energy savings amounted to 40,323 kW.
- Final report "Irrigation Peak Rewards"submitted to IPUC December 1, 2005.
- High satisfaction ratings: the majority of customers enrolled in the 2005 program indicated that they were satisfied and would re-enroll in the program in the future.
- Implementation of the program name change from "Irrigation Peak Clipping" to "Irrigation Peak Rewards" to better reflect the incentive attributes to the target market.

Participation

The year 2005 was the first full year of the program after a successful one-year pilot in 2004. Participation rates from a service point perspective (a customer may have more than one metered service point) show the program achieved 23.4% participation (894 service points out of 3,820 eligible service points).

From a customer perspective, 254 customers, or 22.8% of the 1,112 eligible customers, chose to participate.

For 2005, all of the present service points were in Idaho.

Demand Impact

In 2005, the program produced substantial and measurable impacts on peak demand. Over the course of the summer, the program produced an average load reduction of 23.8 MW with an average of 26.9 MW load reduction in the month of July. The maximum load reduction occurred during the second half of June when an estimated 40.3 MW reduction was achieved representing 134% of the IRP goal of 30 MW of peak savings.

Customer Satisfaction

A customer satisfaction survey was administered in the fall of 2005. Respondents represented 58% of the participating customers. This survey showed that 89% of respondents were satisfied with the program. Ninety-six percent (96%) stated that they probably would or definitely would participate in the program again. Moreover, 88% indicated that they would be very likely or somewhat likely to recommend the program to another irrigation customer. Seventy-six percent (76%) indicated that the incentive was what initially persuaded them to participate in the program.

Plan for 2006

The growth goals of the program for 2006 are:

- Enroll 1,000 eligible metered service points in Idaho and Oregon.
- Achieve an average of 30 MW load reduction for the month of July.
- Continue program evaluation and refinement through customers, the EEAG, other groups, and individuals.

Idaho Power strives to improve customer satisfaction and evaluate the program for effectiveness and look for areas of improvement for Idaho Power's irrigation customers.

Energy Efficiency Programs

DSM Energy Efficiency initiatives are applicable to all of Idaho Power customer segments including residential, irrigation, commercial, and industrial. Program funding is provided by Idaho and Oregon Riders as well as the BPA and through Idaho Power O&M funds.

A common theme of Energy Efficiency programs is their focus on identifying significant segments within the customer base where prevalent energy practices can be modified to deliver desired energy savings.

Opportunity areas span a wide range including the application of new technologies in all customer segments in heating, cooling, and lighting; in the design of new processes and procedures to reduce energy consumption for various tasks and industries; and improved methods for the way new and existing homes and commercial buildings are designed for energy use.

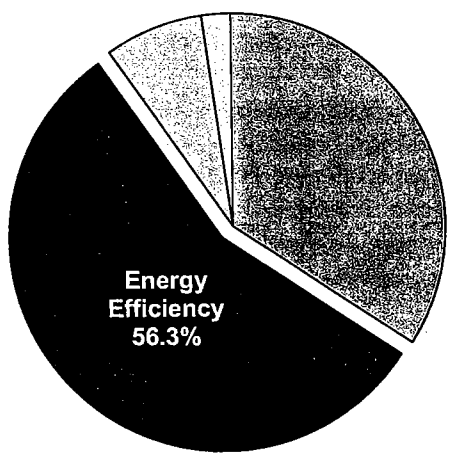
Five programs were added or substantially redesigned for 2005. The following pages provide descriptions for each of the programs in the Energy Efficiency sector. Each program write-up provides program descriptions, highlights, and accomplishments for the year. Plans for responding to the challenges and opportunities identified in 2005 are presented as well.

Figure 4 provides a breakout of 2005 expenses and the relative ranking for these programs as a percent of the total DSM expense. The figure shows that the Energy Efficiency programs received over 50% of the resources within the 2005 DSM portfolio.

Figure 4. Energy Efficiency 2005 Program Expense

Energy Efficiency Programs	Expense	% of All DSM
Energy House Calls	$375,610	5.8%
ENERGY STAR® Homes Northwest	$253,105	3.9%
Oregon Residential Weatherization	$612	0.0%
Rebate Advantage	$46,173	0.7%
Savings with a Twist	$73,152	1.1%
Weatherization Assistance	$1,446,835	22.2%
Commercial Building Efficiency	$194,066	3.0%
Oregon Commercial Audit	$5,450	0.1%
Oregon School Efficiency	$86	0.0%
Industrial Efficiency	$1,128,076	17.3%
Irrigation Efficiency Rewards	$150,577	2.3%
Total	**$3,673,744**	**56.3%**

Demand Response	34.1%
Energy Efficiency	56.3%
Market Transformation	7.3%
Other Programs and Activities	2.3%



ENERGY EFFICIENCY

Energy House Calls

Program Overview

Customer Segment	Residential
Target Customers	Manufactured Home Occupants
Program Life	October 2002—Ongoing
Program Manager	Annie Black

Summary 2005

Participation	891 homes
Total Utility Costs	$375,610
BPA	$375,346
IPC O&M	$265
Savings in kWh	1,775,770 kWh

Description

Idaho Power launched a pilot program in October 2002 to evaluate the viability of providing duct sealing and additional efficiency measures to Idaho Power customers living in manufactured homes. Upon successful completion of the pilot program, Idaho Power rolled the program out to the entire service area in 2003. At that time the program was renamed Energy House Calls for Manufactured Homes (formerly known as Manufactured Home Energy Checkups). The program is funded by the BPA through its C&RD funding program.

BPA funds cover the participant costs and include the following services and products:

- Duct testing and sealing according to Performance Tested Comfort System (PTCS) specifications endorsed by the BPA
- Three compact fluorescent light bulbs
- Two furnace filters along with replacement instructions
- Hot water heater temperature test for proper setting
- Energy efficiency educational materials for manufactured home occupants

The program is managed under contract by Ecos Consulting in partnership with Delta-T Inc., both of whom have experience in managing and providing duct sealing service programs. Ecos and Delta-T coordinate local weatherization and energy efficiency service providers to market and perform the services. Quality assurance is provided by third-party audits in compliance with the BPA's C&RD guidelines.

Results

2005 Highlights

The year 2005 was the third full year of operation for this program. The program garnered energy savings throughout the year and earned the company credits in the BPA's C&RD program through September 2005, at which time Idaho Power completed its obligations to the BPA under the terms of the funding agreement. Subsequently, for the last three months of the year, Idaho Power continued to fund the program in order to ensure continuity prior to the transition from the C&RD program to BPA's new funding program (CRC) beginning in 2006.

Participation

Participation in this program was lower in 2005 than in the prior year. This was due primarily to a focused effort toward recruiting rural customers and those who live in colder climates. This focus represented a departure from the initial program target segment of Idaho Power 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.

Energy Impact

The primary source of savings from the program came from increasing the efficiency of the heating system through improving heated air delivery from the furnace through the duct system. Improved delivery through the duct system also provides energy savings associated with cooled air where applicable.

The installation of three CFL units into high lighting use areas provides additional energy savings.

The furnace filter and water temperature evaluation services provided by the program are designed to educate the occupants on maintaining energy efficient practices in the future. The energy impact of these measures are not quantified nor included in the total energy impact of the program. Table 3 summarizes 2005 program service activity for Idaho and Oregon customers.

Table 3. Energy House Calls 2005 Activity and Energy Savings Summary

	Idaho	Oregon	Total
Activity			
Test Only	38	2	40
Test and Seal	836	15	851
Total Duct Measures	874	17	891
CFL Bulbs	2,595	51	2,646
Furnace Filters	1,627	26	1,653
Water Temperature (Average)	119	111	230
Total Other Measures	4,341	188	4,529
Energy Savings kWh	1,749,792	25,978	1,775,770

Customer Satisfaction

During the program's pilot and early years, customer surveys provided feedback useful to program implementation. As the program has matured, customer surveys indicated consistently high satisfaction. Idaho Power receives many unsolicited responses from customers praising the services and thanking Idaho Power for the positive results of the program. Thus, for 2005, direct customer surveys were not undertaken.

Plan for 2006

Beginning in February 2006, program funding will come from the BPA's CRC program. The CRC guidelines dictate a focus on homes with higher potential BPA credits. Available housing units with such credits are concentrated in Twin Falls, Pocatello, and mountain communities in Idaho and Oregon.

The Energy House Calls program will retain its current management and operations model within the BPA funding guidelines.

ENERGY EFFICIENCY

ENERGY STAR® Homes Northwest

Program Overview

Customer Segment	Residential
Target Customers	Residential new home market
Program Life	March 2004—Ongoing
Program Manager	Celeste Becia

Summary 2005

Participation	203 homes
Total Utility Costs	$253,105
Idaho Rider	$247,071
IPC O&M	$6,034
Savings in kWh	421,834

Description

The ENERGY STAR® Homes Northwest Program is a regionally coordinated initiative supported in partnership between the Idaho Power, the Alliance, and the Idaho Energy Division in support of improved construction practices of single-family homes. The energy goal of the program is to provide homes that are 30% more energy efficient than those built to standard Idaho residential code.

Idaho Power's energy focus for the program is to reduce future peak summer demand by increasing the efficiency of residential building envelope construction practices and increasing efficiency of summer air conditioning use.

The primary market activities and incentives that Idaho Power provides through the program are the following:

- Consumer marketing communications conveying the benefits of ENERGY STAR® homes
- A $750 incentive per qualifying home to participating builders
- Program management services to coordinate the local partnerships between Idaho Power, builders, and real estate service providers

Results

2005 Highlights

- Increase of 450% over 2004 in the number of certified homes (from 44 to 203)
- Increased builder participation from 32 to 63, including two high-volume builders (60 to 125 homes per year)
- Implemented quarterly realtor training sessions
- Conducted builder breakfast events in Twin Falls and Pocatello
- Sponsored 11 Parade homes in Ada, Canyon, and Bannock counties
- Completion of a marketing communication program that included bill stuffers, print ads in real estate tabloids, public relations events, and a new Internet marketing campaign using Google keyword advertising
- Updated home inspection forms to ensure energy savings verification

Participation

While builder participation rates were on target, the number of completed housing units fell short of the 2005 goal of 465 homes. However, the number of homes under construction at the end of the year exceeded 200, boding well for 2006. For 2005, over 95% of the ENERGY STAR®

homes completed were built in the Treasure Valley area. The program's market share in 2005 was approximately 2% of the total 10,500 homes built that year. A long-term goal of 20% ENERGY STAR® homes of all new homes built in the area has been established.

Energy Impact

While there is considerable variation in each home due primarily to interior square footage, the average energy savings from an ENERGY STAR® home with central air conditioning in the Treasure Valley provides 2,078 kWh savings and 2 kW demand savings.

Customer Satisfaction

To date, no comprehensive customer satisfaction evaluations have been undertaken for this program by Idaho Power. However, unsolicited customer feedback has been overwhelmingly positive as homeowners compare the comfort, quality, and energy bills from their homes with their neighbors'.

Plan for 2006

The year 2006 will focus on improving builder productivity in ENERGY STAR® techniques, and improving timeliness in quality assurance inspections for home certification.

Builder training efforts include increasing the number of classes and targeting high-volume builders to integrate and standardize their techniques with this program.

Idaho Power is working with the Idaho Energy Division to identify constraints and implement process improvements to decrease the time between builder completion, inspection, and certification.

Idaho Power has set a goal of 629 certified homes for 2006. Overall, Idaho Power expects that the original targets for the program are achievable.

The real estate market continues to maintain the construction pace of 2005, and dozens of new subdivisions are planned for 2006 in the Treasure Valley. Local jurisdictions and utility companies are challenged to provide critical development services allowing these projects to move forward. In addition to these challenges, inclement winter weather has resulted in delays in original subdivision completion timelines.

Therefore, in order to meet the aggressive goal for 2006, Idaho Power is undertaking the following activities:

- Coordinate large consumer marketing campaigns with the Alliance.
- Increase the number of realtor training sessions from two in 2005 to seven in 2006.
- Sponsor more builder and subcontractor training sessions as they develop.
- Increase market reach and effectiveness by working with the Alliance to target builders who are "champions" of the benefits of ENERGY STAR® building techniques.
- Develop a comprehensive strategy for signing an agreement with Treasure Valley's largest homebuilder to become an ENERGY STAR® builder.
- Expand into the Oregon service area.

ENERGY EFFICIENCY

Oregon Residential Weatherization

Program Overview

Customer Segment	Residential
Target Customers	Oregon service area residential units
Program Life	1982—Ongoing
Program Manager	Cheryl Paoli

Summary 2005

Participation	Four customers
Total Utility Costs	$612
Oregon Rider	$351
IPC O&M	$261
Savings in kWh	7,927

Description

As required by Oregon statutes, Idaho Power offers free energy audits for electrically heated homes of customers within the Oregon service area. Upon request an Idaho Power representative visits the home to analyze it for energy efficiency and an estimate of cost and savings for specific measures is given to the customer. Idaho Power offers financial assistance for a portion of the cost of weatherization measures either as a cash incentive or with a low-interest loan.

Results

2005 Highlights

- Seventeen home energy audits for Oregon customers were completed in 2005.
- Six payments totaling $612.02 were granted for the year.
- Total kWh savings of 7,927.

Participation

Four customers participated in six weatherization projects, including one triplex.

Energy Impact

	kWh Savings
Ceiling Insulation	5,950
Doors	149
Windows	1,828
Total	**7,927**

Customer Satisfaction

The Oregon Residential Weatherization program has been in operation for many years. Anecdotally, customer satisfaction remains high due to consistent local presence in the area.

Plan for 2006

- Continue this program for 2006.
- Evaluate potential for integrating program into design of expanded residential efficiency program.

ENERGY EFFICIENCY

Rebate Advantage

Program Overview

Customer Segment	Residential
Target Customers	Buyers of new manufactured homes
Program Life	January 2003—Ongoing
Program Manager	Annie Black

Summary 2005

Participation	98 homes
Total Utility Costs	$46,173
BPA	$45,993
IPC O&M	$180
Savings in kWh	312,311 kWh

Description

In 2003, Idaho Power launched a program to encourage manufactured home buyers to purchase energy-efficient Super Good Cents or ENERGY STAR® homes. The program, formerly called Energy Efficient Manufactured Home Incentives, was renamed Rebate Advantage at the start of 2004.

The goal of the program is to help buyers purchase energy efficient manufactured homes through incentives and by encouraging salespeople to promote the benefits of energy efficiency.

Customers who purchase a Super Good Cents/ENERGY STAR® home and site it in Idaho Power's service area are eligible for a $300 rebate. In addition, the salesperson receives a $75 incentive for each qualified home sold. The program is funded through BPA's C&RD funds.

Quality control and energy efficiency specifications for establishing qualified homes are established by the Northwest Energy Efficiency Manufactured Homes (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 Super Good Cents or ENERGY STAR® homes.

Results

2005 Highlights

Program funding from BPA generated BPA credits through September 2005. In order to maintain continuity and stability in the offering to the marketplace, Idaho Power provided support for the program until the BPA's new funding program (CRC) was available.

Participation

Participation in the program was fairly steady throughout the year and similar in volume to past years. Participants typically are from small rural towns in Idaho Power's service area. The geographic reach of this program is noteworthy as seen in Table 4 in which Oregon homes represent over 10% of the total homes rebated. Approximately one-third of all manufactured home dealers with sales in Idaho Power's service area are participating in this program.

Table 4. Rebate Advantage 2005 Activity and Energy Savings Summary

	Idaho	Oregon	Total
Activity			
Homes	87	11	98
Towns with Homes Sited	39	9	48
Counties with Homes Sited	18	3	21
Salespeople(1)	30	4	30
Dealers(1)	16	3	16
Manufacturers(1)	11	3	11
Energy Savings kWh	279,971	32,340	312,311

(1) Some sales groups sell in both Idaho and Oregon. Totals reflect unique instances only.

Energy Impact

Savings in this program are largely due to improvements in the shell of the home, resulting in more efficient use of heating and cooling energy use. 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. Energy savings for the year are estimated to be 312,311 kWh.

While the program focus is on overall energy efficiency, peak impacts from reduced air conditioning can be attributed to the program.

Customer Satisfaction

In discussions with salespeople, it is clear that they appreciate having this tool to work with customers to buy the energy efficient package for their new home. Anecdotally, customer input indicates an appreciation of the incentive and benefits of energy efficient manufactured homes.

Plan for 2006

In 2006, ENERGY STAR® qualified manufactured homes will be eligible to receive a tax credit under the 2005 Federal Energy Policy Act. Discussions are under way with regional partners to evaluate approaches to leverage this credit to the benefit of the program.

Operationally, the program will continue similarly to 2005. It will be funded, as of February 2006, by the BPA's CRC program.

Marketing plans include a spring campaign to increase customer and sales staff awareness and understanding of the features of an energy efficient home.

ENERGY EFFICIENCY

Savings with a Twist

Program Overview

Customer Segment	Residential
Target Customers	Residential users of incandescent light bulbs
Program Life	Fall 2005
Program Manager	Cheryl Paoli/Annie Black

Summary 2005

Participation	35,008 CFL units
Total Utility Costs	$73,152
Idaho Rider	$73,152
Savings in kWh	1,386,317

Description

Idaho Power joined the Northwest ENERGY STAR® Consumer Products program in a region-wide compact fluorescent light (CFL) bulb promotion. The Savings with a Twist program was designed to highlight attractive promotional pricing and to focus consumer attention toward action to change out incandescent bulbs with energy efficient CFL units.

The primary target market of the program is the residential customer base. The primary goals of the program were the following:

- Build continued awareness of the efficiency and benefits of CFL lighting.
- Highlight recent improvements in lighting technology and quality.
- Continue to build market penetration.
- Capture incremental energy savings in residential lighting use.

The regional span of the program provided additional efficiency and effectiveness through coordinated advertising and retailer planning.

Marketing included regional advertising and retailer communication including newspapers, mailings, and in-store point of sale collateral.

Retailer participation included both large and small companies in hardware, drug, grocery, and discount store channels throughout the Idaho Power service area.

Idaho Power's participation included funding of $1.25 per-bulb sold (up to 108,193 bulbs). These funds covered a buy-down paid to manufacturers and program administrative costs. The buy-down reduced in-store prices to as low as $0.99 per bulb.

The program was sponsored jointly by the Alliance, the BPA, and local utilities.

Administration of the program, including auditing sales records is being provided by Portland Energy Conservation, Inc. (PECI) on behalf of all of the regionally participating utilities.

Results

2005 Highlights

Results from consumer participation are very promising and indicate that continued promotional efforts are effective in driving changes in residential lighting applications.

The promotion was originally planned to end in December 2005; however, due to product availability constraints from manufacturers, the program extended into the first quarter of 2006. The supply shortfalls inhibited restocking and created marketing problems for the program.

Due to the extended implementation, complete results of the program will not be available until

summer of 2006. As of the close of 2005, Idaho Power verified the sale of, and paid the subsidy on, 35,008 CFL units.

Participation

Participating manufacturers included Greenlite, General Electric, Feit Electric, TCP, and Sylvania.

Participating retailers included Home Depot, Fred Meyer, Albertsons, K-Mart, Lowe's, Costco, True Value, Grover's, and M.H. King.

While not part of the primary target audience for this program, small commercial customers were likely participants in the program as the retailers serve this customer segment.

Bulbs promoted by the Savings with a Twist program were available to Idaho Power customers in Idaho through participating retailers. A limited number of bulbs outside Idaho Power's service area were included in the program to capture customers who shopped outside of the Idaho Power service area. Program totals are adjusted for bulbs sold to out-of-service participants.

Energy Impact

The energy impact of the program is derived through guidance from Northwest Power and Conservation Council. The guidance calls for derivation of savings based upon the difference between incandescent bulbs and CFL bulb replacement and adjusted for variable impacts due to regional differences including heating impact, market saturation rates, and lighting usage profiles. Idaho Power will continue to monitor these variables.

For the 2005 program, Idaho Power has determined that the energy savings factor is 39.6 kWh per bulb.

Customer Satisfaction

Surveys of retailers indicate that the Savings with a Twist promotion delivered unanticipated rates of consumer purchases. Many retailers reported selling out of bulbs within hours of stocking displays. Other stores successfully reordered the product and sold more bulbs than originally anticipated.

Plan for 2006

The BPA is presently evaluating the 2005 program. Initial indications of the regional impact are promising and expectations are that the BPA will sponsor another CFL promotional event in the fall of 2006. Idaho Power will re-evaluate the program design prior to committing to participation in 2006.

ENERGY EFFICIENCY

Weatherization Assistance for Qualified Customers

Program Overview

Customer Segment...	Residential
Target Customers	Qualifying Residential
Program Life	Ongoing
Program Manager.....	Cheryl Paoli

Summary 2005

Participation	593 homes, 5 non-profit agencies
Total Utility Costs	$1,446,835
BPA.....	$76,736
IPC O&M.....	$1,370,099
Savings in kWh	3,273,590

Description

The Weatherization Assistance for Qualified Customers (WAQC) previously referred to as the Low Income Weatherization Assistance (LIWA) program provides funding for the installation of cost-effective weatherization measures in qualified owner occupied and rental homes that are electrically heated. These enhancements enable low-income families to maintain a comfortable home environment while helping save energy and money otherwise spent on heating and cooling.

The program is modeled after U.S. Department of Energy programs. In Idaho, the programs are managed through Health and Welfare offices and in Oregon by Housing and Community Services.

Idaho Power administers the WAQC program by allocating funds based on U.S. Census data of household income and by qualified customer distribution in the Idaho Power service area.

The funds are distributed to local Community Action Partnership (CAP) agencies located in Idaho Power's service area. The CAP agencies coordinate the specific tasks through trained weatherization crews and contractors.

Results

2005 Highlights

- Idaho Power funded a varying percentage of the 593 home weatherization projects for electrically heated homes for qualified customers in Idaho and Oregon.

- Five non-profit agency projects, representing clientele with special needs received weatherization improvements funded 100% by Idaho Power.

Participation

Eight CAP agencies participated in the program in 2005. Five of the eight are located in Idaho and three in Oregon. Two of the Oregon agencies were new to the program in 2005. Their participation improved access to the program by small Oregon communities within the service area.

Energy Impact

On average, each customer served by the program is estimated to save over 5,500 kWh annually.

Weatherization improvements are designed to impact both energy and living quality by:

- Reducing energy costs for qualified customers by increasing the efficiency of their homes.

- Making services available at no cost to qualifying applicants who rent or own their homes.

- Improving indoor environmental and livability quality through improvements

such as insulation augmentation, improving weather striping, and sealing air leaks to make a home, apartment, or manufactured home more comfortable.

Customer Satisfaction

Consumers are educated on weatherization and energy saving practices in conjunction with a weatherization audit. An energy calculator and energy saving tips sheet is provided along with a satisfaction survey at the completion of each project. The surveys are returned to the originating CAP agency.

In 2005, 97% of all weatherization assistance customers reported that their homes were more comfortable due to the program.

2005 Summary

Table 5 shows the expenses for the program by CAP agency and non-profit organizations for Idaho and Oregon.

Table 6 shows the annual energy savings from the efforts of the program in 2005 totaling 3,273,590 kWh.

Plan for 2006

Idaho Power intends to maintain the pace of implementation for this program. The 2006 goals include:

- Weatherization projects for 584 homes
- Weatherization projects for six non-profit agencies
- Energy savings of 3,317,000 kWh

Table 5. Weatherization Assistance 2005 Year-End Expenses

	2005	
	Projects	**Expenses**
IPC Payments		
CAP Agencies		
CCOA	108	$237,578
EI-ADA	287	$701,048
EISSA	7	$12,788
SCCAP	103	$175,501
SEICAA	60	$116,087
ID Total	**565**	**$1,243,001**
MCOA-OR	26	$35,260
HCSCS-OR	1	$1,290
CCNO-OR	1	$2,266
OR Total	**28**	**$38,816**
Total CAP Agencies	**593**	**$1,281,817**
Non-Profit Projects		
Non-Profits ID	5	$54,382
Non-Profits OR	0	$0
Total Non-Profit	**5**	**$54,382**
Total IPC Payments	**598**	**$1,336,199**
IPC Administration		**$110,636**
Total Program Expense		**$1,446,835**

Table 6. Weatherization Assistance 2005 Year-End Energy Savings

	kWh Savings for 2005
CAP Agencies	
CCOA	819,212
EI-ADA	1,580,650
EISSA	33,214
SCCAP	317,165
SEICAA	267,579
ID Total	**3,017,820**
MCOA-OR	89,302
HCSCS-OR	2,304
CCNO-OR	2,673
OR Total	**94,279**
Total CAP Agencies	**3,112,099**
Non-Profit Projects	
Non-Profits ID	161,491
Non-Profits OR	0
Total Non-Profit	**161,491**
Total kWh Savings	**3,273,590**

ENERGY EFFICIENCY

Commercial Building Efficiency

Program Overview

Customer Segment...	Commercial
Target Customers	Small and mid-size commercial customers with construction projects
Program Life	April 2005–Ongoing
Program Manager.....	Curt Nichols

Summary 2005

Participation	12 projects
Total Utility Costs.....	$194,066
Idaho Rider.....	$186,290
IPC O&M.....	$7,776
Savings in kWh	494,239

Description

The Commercial Building Efficiency program targets those commercial customers involved in significant construction projects to which energy efficient technologies and methods can be applied.

The program was designed in late 2004 and was launched in the spring of 2005.

Operationally, the program focuses on offering a "menu" of interior lighting and cooling efficiency options and associated incentives. The incentive structure includes bonuses for commissioning the project to ensure that the systems perform as designed.

A "Custom Projects" option is also available for efficiency projects targeted at building system components such as refrigeration systems.

Program marketing plans are executed through enlisting architects, engineers, and other local design professionals to include program benefits into the designs for Idaho Power's targeted commercial customers. Marketing communication programs also reach out to building developers, building officials, and Idaho Power field staff.

Through this program, Idaho Power is a primary sponsor of the Boise Integrated Design Lab which provides technical assistance to local architects and designers.

Results

2005 Highlights

- New program design unveiled in mid-April 2005 to large audiences of customers and stakeholders. Media coverage included prominent articles in the *Idaho Statesman*, the *Idaho Business Review*, and various industry-focused newsletters.

- Implemented a strategic advertising campaign with full page ads in the *Idaho Business Review*, and the Building Owners and Managers Association (BOMA)-Boise newsletter.

- Conducted a wide reaching communications program including presentations to:

  - BOMA

  - Rotary Club

  - American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Conference

  - International Society of Healthcare Engineering conference

- Created a monthly electronic update for local designers, developers, building

officials, and key customers to keep them informed about program offerings.

- Coordinated efforts with the Alliance's BetterBricks initiative: sponsoring their 2005 Idaho awards, participating in their training sessions, and working with their Integrated Design Lab in Boise.

- Developed program to encourage timely filing applications by offering a year-end bonus (Green Building Wall Calendar) for all applications received by December 15, 2005.

- Exceeded program goals of 100 kW peak demand reduction and 389,000 kWh/yr energy savings.

- Expansion of program offering into Oregon.

Participation

The 12 projects completed for the year involved fewer customers than initially anticipated. However, the projects completed were of a much larger scope than expected.

Energy Impact

In its initial year, the Commercial Building Efficiency program exceeded its goals for both energy savings (kWh/yr) and demand reduction (kW). Both were achieved with much lower incentive payouts than expected enhancing the program's cost effectiveness.

Customer Satisfaction

Post-participation satisfaction surveys show fully 83% of participants strongly agreed that they received "excellent service and value from Idaho Power."

One participant added a survey comment that said, "Very helpful. Wonderful program."

Plan for 2006

With the approved expansion of the Commercial Building Efficiency program into Idaho Power's service area in Oregon, plans include an expanded marketing effort to increase awareness.

The "Custom Projects" option will be expanded beyond its pilot offering of 2005 to expand the target market.

The current program is scheduled to run through 2006. Prior to the end of the year Idaho Power will conduct evaluation reviews including input from representative stakeholders and integrate modifications and improvements into the program offering for 2007.

ENERGY EFFICIENCY

Oregon Commercial Audit

Program Overview

Customer Segment	Commercial
Target Customers	Commercial customers in Oregon
Program Life	Fall 1981—Ongoing
Program Manager	Curt Nichols/Pat Sullivan

Summary 2005

Participation	36 inquiries, 27 copies of *Saving Energy Dollars* provided, 11 energy audits completed in-house, 7 completed by outside contractor
Total Utility Costs	$5,450
Oregon Rider	$2,975
IPC O&M	$2,475
Savings in kWh	Not measured for this program

Description

The Oregon Commercial Audit program is a statutory program available to all Oregon commercial customers offering a free energy audit for their commercial buildings.

The purpose of the program is to identify opportunities for commercial building owners to achieve energy savings. The program offering includes evaluation (energy audit) and educational services.

The primary vehicle for communicating the program benefits and offer to the target market is through an annual mailing to each customer.

New to the communication for 2005 was an offer for the customer to receive Idaho Power's publication *Saving Energy Dollars* which provides valuable information regarding typical improvement areas and projects for saving energy use and reducing expenses.

Program funding is through the Oregon Rider.

Results

A successful mailing resulted in 36 return inquiries for audits and 27 requests for *Saving Energy Dollars* booklets.

Energy Impact

As an education-only program, the audit does not develop measurable energy savings since there is no requirement for the participant to implement projects identified by the audit.

Customer Satisfaction

Idaho Power continues to look for new ways to increase the reach of this program. Due to the relatively low response rates for the audit feature, Idaho Power believes that the response to the booklet offering by 27 customers was a positive indicator in further satisfying the program needs of this customer base.

Plan for 2006

Idaho Power is evaluating the potential for synergy between the Oregon Commercial Audit Program offerings and the recently approved 2006 expansion of the Commercial Building Efficiency Program into Oregon. Options include adding Building Efficiency Program information into the annual Commercial Audit mailing.

ENERGY EFFICIENCY

Oregon School Efficiency

Program Overview

Customer Segment... Commercial
Target Customers ..... Public K-12 schools in Oregon
Program Life ..... October 2005—Ongoing
Program Manager..... Curt Nichols

Summary 2005

Participation ..... One partial
Total Utility Costs $86
Oregon Rider $86
Savings in kWh ..... None in 2005

Description

The Oregon School Efficiency program is a new initiative designed to operate in close conjunction with the Oregon Department of Energy (ODOE) in energy efficiency upgrades for Oregon public schools.

Idaho Power's participation in the program provides an effective and efficient vehicle to augment the school building energy improvement projects by offering an incentive and a potential tax benefit.

By virtue of the ODOE's prior development of an energy efficiency program targeted at schools, program infrastructure for marketing and operations are in place. Idaho Power's partnership in the program provides a low-cost augmentation to the customer benefits available through the program.

The program reflects Idaho Power's first commercial retrofit for energy savings since the early 1990s.

Idaho Power's participation in the program includes:

- Evaluation of proposals and project plans (previously developed by prospective participants and pre-screened by the ODOE) for cost/benefit viability
- Approval of incentive payment to schools of $0.10 per kWh saved by the completed project
- On a trial basis, approval of additional incentive benefits in the form of passing through to the school Business Energy Tax Credits (BETC) generated by Idaho Power through this program

It should be noted that Idaho Power is evaluating the viability of continuing the BETC pass though for this program.

Results

2005 Highlights

- OPUC approval of the School Efficiency program (Schedule 88) on August 31, 2005.
- Idaho Power/ODOE joint presentation to the school Superintendents at the Malheur County Education Service October monthly meeting.
- Direct mail announcement describing Idaho Power's participation and the program benefits and procedures to the 14 public K-12 school district superintendents in October 2005.
- Completion of energy measures by the first school in late 2005. (Incentive payment and energy savings will be realized in 2006.)

Participation

Idaho Power's target for this program is the 14 public school districts' 60 buildings located in Idaho Power's Oregon service area.

Participation is expected to be high based on high initial interest and the prospects for high energy efficiency returns and lower operating budgets.

Energy Impact

Although several projects are in process, none were finalized in 2005. Associated energy savings will be recognized upon incentive payment in 2006.

Customer Satisfaction

Idaho Power will evaluate customer satisfaction with this new program. As one of the first energy efficiency programs offered by Idaho Power in Oregon, customers are expected to respond positively.

Plan for 2006

- Payment to the school of the first completed project will be promoted through the local media (February 2006).
- A second School Efficiency project was completed in early 2006 and four others are in active development.
- Idaho Power is planning to use its experience with this program to help formulate future commercial incentive programs for existing building retrofits.

ENERGY EFFICIENCY

Industrial Efficiency

Program Overview

Customer Segment...	Industrial
Target Customers	Large Industrial and Commercial Customers
Program Life	October 2003—Ongoing
Program Manager.....	Randy Thorn

Summary 2005

Participation	24 projects, 12 companies
Total Utility Costs.....	$1,128,076
Idaho Rider.....	$1,125,470
Oregon Rider.....	$2,486
IPC O&M.....	$120
Savings in kWh	12,016,678

Description

The Industrial Efficiency program was selected for implementation in the 2004 IRP process. The program is offered to large commercial and industrial customers of Idaho Power in both Idaho and Oregon.

The program targets the acquisition of peak kW and kWh savings from efficiency projects at customer sites through evaluation of existing facilities.

Operationally, the program provides the following:

- Training and basic education on energy efficiency
- Auditing services for project identification and evaluation
- Financial incentives for project implementation

The program is marketed to approximately 300 qualifying customers in Idaho and Oregon who have a Basic Load Capacity of 500 kW or more.

Upon indication of interest, customers initiate an application process which includes:

- Identifying potential projects applicable to their facilities
- Providing sufficient information to Idaho Power to establish a basis for viable conservation projects
- Finalizing application with terms and conditions of each party's obligations

Idaho Power conducts on-site power monitoring and data collection where practical to verify information from the application process to ensure kW and kWh savings are obtainable and within program guidelines.

Due to customer processes in project approval, budgeting, and implementation processes, complex projects may take as long as two years to complete.

Results

2005 Highlights

Stakeholder meetings were held with industrial customers, the EEAG, IPUC representatives, and Idaho Power representatives late in 2004 to review the program. Recommendations for program changes developed from these meetings include:

- Simplification of the incentive calculations
- Expansion and improvement of the scope of the auditing services aspects of the program

- Elimination of the one-year minimum payback requirements
- Approval for program expansion into Oregon for 2006
- Creation of "self-directed" accounts for Schedule 19 and special contract customers

These changes were presented to the EEAG in January 2005. The program was widely accepted by the large commercial and industrial customers in 2005.

Participation

Twenty-four different projects were completed among 12 companies at 19 separate locations in Idaho.

Idaho Power also increased activity in energy auditing and education in 2005. Over 30 walk-through energy audits were performed by company personnel during the year. In addition, a total of 16 initial scoping studies were performed by independent energy service companies. These scoping studies lead to the completion of three detailed studies in 2005.

Customer training and education was another factor in the overwhelming success of the program in 2005. A total of eight workshops were sponsored by Idaho Power. These workshops were hosted in conjunction with the Alliance, Washington State University, the U.S. Department of Energy, and the Idaho Energy Division. Approximately 260 customers participated in these workshops.

Energy Impact

The IRP goal was set at 8,500 MWh for 2005. Actual savings achieved were 12,017 MWh.

Approximately 64% of the total energy savings were achieved through building controls, re-commissioning refrigeration condenser upgrades, and lighting retrofitting.

Customer Satisfaction

This program has been particularly well received with Idaho Power's large commercial and industrial customers as evidenced by the high levels of interest and participation rates.

Plan for 2006

Energy targets for 2006 are 8,500 MWh for Idaho and Oregon.

A second round of stakeholder meetings is currently being planned in early 2006. Discussions will focus on additional improvements to the Industrial Efficiency program.

ENERGY EFFICIENCY

Irrigation Efficiency Rewards

Program Overview

Customer Segment...	Irrigation
Target Customers	New irrigation systems and existing systems being modified
Program Life	October 2003—Ongoing
Program Manager.....	Quentin Nesbitt/Dennis Merrick

Summary 2005

Participation	38 customers
Total Utility Costs	$150,577
Idaho Rider.....	$103,823
IPC O&M.....	$46,754
Savings in kWh	1,012,883

Description

The Irrigation Efficiency Rewards program was originally developed following selection by the 2004 IRP process. It was designed to improve the energy efficiency of irrigation customers in Idaho Power's service area. The program provides a wide range of financial incentives and educational programs designed to serve the diversity of irrigator needs.

The incentive programs are designed to encourage energy efficiency of irrigation systems by offering a wide range of options to irrigation systems in the service area. These options cover minor and major system improvements. In order to meet the needs of such a wide range of systems, two separate options were developed. For older, less efficient systems, the "Custom Incentive Option" provides for component upgrades and large-scale improvements. For systems where small or maintenance upgrades will provide energy savings, the "Menu Incentive Option" is offered.

Specifics for each of these two incentive alternatives are as follows:

Custom Incentive Option

- Based on irrigation system upgrade or replacement.
- Measures kWh and KW savings and total project cost.
- For system replacement, incentives are the lesser of:
    - $0.25 per kWh saved **or**
    - 10% of total project cost.
- For system upgrade, incentives are the lesser of:
    - Greater of $0.25 per annual kWh saved or $450 per kW, **or**
    - 75% of total project cost.

Menu Incentive Option

- Based on specific component replacement.
- Paid on predetermined average kWh savings per component.
- See detail of Menu Incentive options in Table 7.

Table 7. Irrigation Efficiency Menu Incentive Options

Equipment and Measures	Per Unit Incentive	Per Unit Savings
New flow-control-type nozzles replacing existing brass nozzles	$1.50	20 kWh/yr
New brass nozzles replacing existing worn nozzles	$0.25	20 kWh/yr
Rebuilt or new brass impact sprinklers replacing existing nozzles	$3.00	40 kWh/yr
New rotating-type sprinklers or low-pressure pivot sprinkler heads	$3.00	40 kWh/yr
New low-pressure regulators	$5.00	40 kWh/yr
New gaskets for existing wheel lines, hand lines, valve openers, riser caps	$1.50	30 kWh/yr
New gaskets for existing portable lines	$3.00	30 kWh/yr
New wheel line hubs (if applicable)	$12.00	40 kWh/yr
New wheel line low pressure drains	$0.50	30 kWh/yr
Complete pivot package	$9.00 per outlet	100 kWh/yr
Pipe joint repair of leaking lines	$8.00 per joint	60 kWh/yr

Program Operations

Each proposal for a system or component modification are reviewed and analyzed by an Idaho Power Agricultural Representative to determine and verify savings relative to menu options.

Idaho Power Agricultural Representatives also provide energy audits to customers to evaluate potential program savings.

In addition to incentives, the program provides significant educational and training opportunities for irrigation customers. Idaho Power Agricultural Representatives sponsor, coordinate, and participate in educational workshops for irrigation customers. The workshops provide customers with expert information and education across the service area.

Idaho Power Agricultural Representatives also engage agricultural irrigation equipment dealers in training sessions to increase awareness and product knowledge to promote the program throughout the irrigation equipment distribution channel.

Marketing communication efforts providing awareness of the program include direct mailing, advertisements in agricultural publications, and attendance at agricultural trade shows in the Idaho Power service area.

To participate in the program the customer must identify a project on their system, provide sufficient information indicating the viability of the conservation project, complete an application, and enter into and incentive agreement with Idaho Power.

Results

2005 Highlights

- Completion of stakeholder input process for evaluation and integration into new program design including increased options, higher incentive caps, and higher overall incentive payments.
- Development and rollout of new program design including the Custom and Menu Incentive Options in fall 2005.
- Increased staffing levels by an additional two Agricultural Representatives to meet additional field support.
- Approval by the OPUC for implementation starting in 2006.

Participation

The program is available to all agricultural irrigation customers. Each customer can evaluate the benefits of the options the program makes available and improvement projects can

range from very large to very small. In 2005, 38 payments were made to irrigation customers, 22 of which were incentives under the old program incentive structure and 16 were participants under the new Menu Incentive. Incentives paid to customers in 2005 totaled $78,873.

Energy Impact

The energy impact of the program comes from efficiency in irrigation energy use in the summer months. This efficiency of energy use will impact loads during both peak and non-peak periods. Savings for 2005:

- Summer peak savings of 401 kW
- Summer energy savings of 1,012,883 kWh

Customer Satisfaction

The issue of high energy bills has been a recurring theme in Idaho Power irrigation customer satisfaction surveys. The Irrigation Efficiency Rewards program is designed to improve customer satisfaction by helping them find ways to reduce their energy bills through efficiency. In addition to financial incentives to reduce bills, the program provides assessment services through its auditing process. The educational aspect of the program provides a broad sharing of state of the art knowledge and best practices. These services are available to all customers in this customer rate class.

In as much as modifications to the program were driven by customer needs, Idaho Power expects to see improvements in customer satisfaction from the program. Idaho Power will continue to monitor customer satisfaction in relation to the program offerings.

Plan for 2006

In anticipation of the increased participation rates, the program energy savings goals for 2006 have been increased to 2.6 MW and 5,200 MWh.

A Program Specialist will be added to the staff to aid in building customer awareness, understanding, and participation. Additional areas of support will include project administration and coordination to improve implementation time and general responsiveness.

MARKET TRANSFORMATION

Market Transformation is a method of achieving energy savings through engaging and influencing large national and regional organizations who are gatekeepers to decisions that impact energy usage in products, processes and procedures affecting electrical power consumption.

Such benefits are achieved by Idaho Power participation in the Alliance along with a consortium of other utilities throughout the Pacific Northwest to provide large-scale market transformation services.

The Market Transformation model is designed to return energy savings that would otherwise be unreachable individually by virtue of pooling resources into a single organization that is solely focused on large-scale programs.

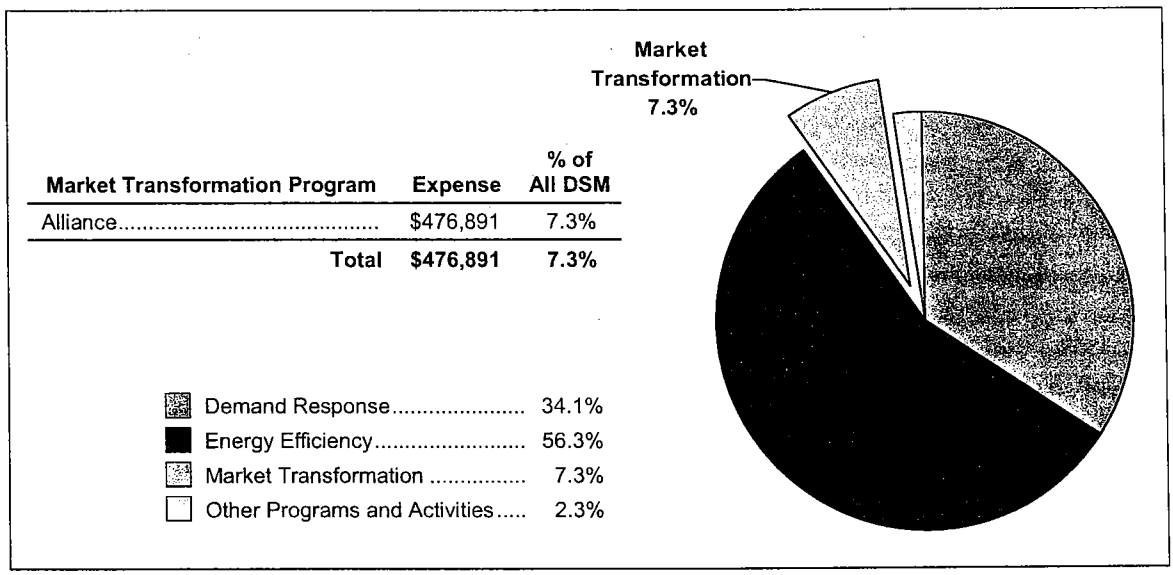
Activities include industry design standards, materials sourcing, advertising, process methodology, and others.

Many of the DSM programs implemented in Idaho Power's service area have their genesis in Alliance activity, including ENERGY STAR® Homes Northwest, Savings with a Twist, and certain aspects of Commercial Building Efficiency.

The following pages describe Idaho Power's relationship with the Alliance, the activities and accomplishments of 2005, and the benefits and costs associated with the Market Transformation activities in the past year.

Figure 5 provides a breakout of 2005 expenses for Market Transformation activities in the DSM portfolio.

Figure 5. Market Transformation 2005 Program Expense



Market Transformation Program	Expense	% of All DSM
Alliance	$476,891	7.3%
Total	**$476,891**	**7.3%**

MARKET TRANSFORMATION

Northwest Energy Efficiency Alliance

Idaho Power accomplishes market transformation programs in Idaho Power's service area through membership and coordinated activities with the Alliance. The Alliance is a regional group whose mission is to catalyze the Northwest marketplace to embrace energy-efficient products and services.

Industrial Alliance Activities in Idaho

In Idaho, the Alliance focuses on selecting specific food-processing customers to provide support for management assessment and planning tools as well technical assistance in motors, pumps, and compressed air systems. Because Idaho Power's customers make up a significant portion of the region's food-processing load, focused effort is being made to select Idaho Power customers for demonstration sites. It is anticipated that in the next six months these customers' sites will be announced.

Underwritten by the Alliance in 2005, Idaho Power attracted many of the regional industrial technical training and technical workshops to Idaho.

And as described in the following pages, Idaho Power is participating in the Distribution Efficiency Initiative of the Alliance.

Commercial Alliance Activities in Idaho

In 2005, the Alliance launched a new Commercial Sector Initiative with the primary objectives of targeting the hospital and grocery sectors as well as development of integrated design products and services. In Idaho, the Alliance increased support of the Boise Integrated Design Lab and BetterBricks trainings and workshops. This included sponsoring the 2nd Annual BetterBricks Awards which was very successful. Also, Boise was the demonstration site of a Desert CoolAire HVAC unit installed in the early winter 2005.

The Idaho Power Buildings Efficiency program is strategically designed to leverage the BetterBricks and Boise Integrated Design Lab offerings.

Residential Alliance Activities in Idaho

The Alliance has two primary programs in the residential sector—ENERGY STAR® Homes Northwest and Consumer Products. Idaho Power is one of the leading regional partners in the ENERGY STAR® Homes Northwest program, providing many of the newer marketing tools such as the ENERGY STAR® video and the Google search path. Idaho Power also was a partner with the Alliance in the Savings with a Twist CFL program. Both of these programs were reviewed in the previous section.

Other Alliance Activities in Idaho

In 2005, the Alliance initiated a new homes construction survey to monitor the building characteristics of new residential building stock in the region. Idaho Power has chosen to pay for an additional over-sample in the Treasure Valley in order to obtain statistically valid data for energy efficiency features of new homes in this area. Preliminary data will be provided mid-2006.

The Alliance continues to provide energy code support to jurisdictions in Idaho. This will help provide the technical and practical support needed when the state evaluates adopting the 2006 International Energy Code.

Each year the Alliance underwrites the Idaho Energy Conference through a contract with Association of Idaho Cities. The Alliance continues to provide general information support to the region by funding the Energy Ideas Clearinghouse and ConWeb.

Alliance Funding Review

In 2005, Idaho Power began the first year of the 2005–2009 contract and funding agreement with the Alliance. Idaho Power funds approximately $1.3 million per year to the Alliance to implement market transformation programs in Idaho Power's service area. Idaho Power had on account a $1.9 million credit with the Alliance at the beginning of 2005 and chose to apply that money to the 1st and 2nd 2005 quarterly payments. Concurrently, Idaho Power requested that it be allowed to pay for future Alliance payments through the Idaho and Oregon DSM Riders. In Order No. 29784 the IPUC allowed funding in this manner. The OPUC subsequently allowed future funding for the Alliance in the Oregon DSM Rider through Advice No. 05-03. Idaho Power spread the remaining $1.4 million credit across the rest of the 2005–2009 contract time period. This was to attempt to reduce the rate swing impacts on Idaho Power customers.

In 2005, Idaho Power paid $476,890 to the Alliance on a jurisdictional basis. Idaho's share of the payments was $440,619 (95%) and Oregon's was $36,271 (5%). These amounts reflect only payments for the 3rd and 4th quarters, because the payments due the first two quarters were covered by the credit balance accrued at the end of 2004. These amounts do not include other costs to participate in the Alliance, such as employees' time and travel that were absorbed by the company.

Preliminary estimates reported by the Alliance indicate that Idaho Power's share of regional market transformation MWh savings for 2005 is 20,054 which is 2.29 MWa. Idaho Power relies on the Alliance to report the energy savings and other benefits of the Alliance's regional portfolio of initiatives.

For further information about the Alliance visit their Web site at www.nwalliance.org.

Other Programs and Activities

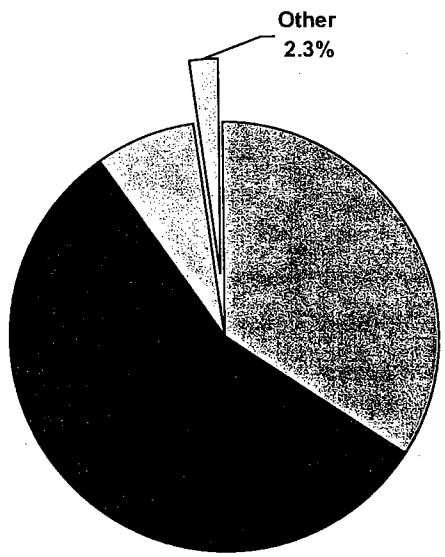
Other Programs and Activities represent a wide range of small projects that are outside of the purview of the other DSM programs.

These programs can cover virtually any type of project within the scope of the DSM mission at Idaho Power including small demonstration projects of new technologies, supporting education opportunities in DSM in the service area, development of new educational initiatives, and general support for the overall DSM effort.

Small by nature but valuable nonetheless, brief overviews of each of these 2005 Idaho Power projects are provided on the following pages.

Figure 6 provides a breakout of 2005 expenses and the relative ranking for these programs as a percent of the total DSM expense.

Figure 6. Other 2005 Program Expense



Other Programs and Activities	Expense	% of All DSM
Building Operator Training	$1,750	0.0%
Commercial Education Initiative	$3,497	0.1%
Distribution Efficiency Initiative	$21,552	0.3%
Other C&RD	$101,177	1.5%
Residential Education Initiative	$7,498	0.1%
Small Project/Education Funds	$14,896	0.2%
Total	**$150,370**	**2.3%**

Demand Response	34.1%
Energy Efficiency	56.3%
Market Transformation	7.3%
Other Programs and Activities	2.3%

OTHER PROGRAMS AND ACTIVITIES

Building Operator Training

The training program that was formerly held in Boise and exclusive to school building operators was expanded to Pocatello and opened to building operators from institutional facilities in 2005. Scholarships were offered and seven building operators were trained. These people were responsible for 868,333 square feet of buildings. Energy savings for building operator certification is based on an Alliance evaluation that shows 0.5 kWh/square foot/year. This resulted in estimated savings of 434,167 annual kWh.

Commercial and Residential Education Initiatives

These two education-oriented initiatives were in the pre-formulation stage during 2005.

The goal of these initiatives is to identify the general education needs of these groups and to gather information and develop educational materials that are complementary to the existing programs in the Residential and Commercial sectors.

The year 2006 will see these initiatives developed and implemented to meet the comprehensive customer education needs for energy issues within the Idaho Power service area.

Distribution Efficiency Initiative

Substation Pilot Demonstration Project

The Alliance is conducting a Pilot Demonstration project with 10 Northwest utilities, both public and private, to determine efficient ways to design and operate distribution feeders. The goal is to achieve energy savings by limiting the primary distribution system voltage drop to 4V to 5V and operate the feeder voltage in the lower bandwidth of the acceptable voltage range, which is 126V to 114V to the customer meter. In addition, using line drop compensation settings in the substation voltage regulators will help reduce the average feeder voltage during off-peak periods. The study anticipates that the average system voltage can be reduced by 3–5% and the expected energy savings will be from 1–3% on average. The Pilot Demonstration study will help determine the energy savings on the utility side of the meter and the energy savings for the customers.

Load Research Project

The Alliance is conducting a residential load survey project at 500 locations with 10 Northwest utilities, both public and private, to determine a relationship between the utility service voltage and the demand and energy consumed by residential customers. The study will use a Home Voltage Regulator (HVR) manufactured by MicroPlanet to adjust the service entrance voltage of the resident and recording meter will document the voltage, demand, and energy usage. The HVR will operate at normal utility voltage for 24 hours and then switch to regulate the service entrance voltage to 115V for the next 24 hours, toggling day on and day off of a one-year period. The voltage and energy relationship will be compared between the control days and the non-control days to determine the change in service entrance voltage and demand and energy used by the residential customer. An in-home survey will be conducted to determine end use load types, such as electric heating, air conditioning cooling, type of lights, and other energy related information. A sample design was developed by RLW, Inc. to determine the sample size and the strata to determine if different end use load types have a unique energy to voltage relationship.

2005 Highlights

- Sixty HVRs have been installed in Southern Idaho. Distribution line regulators have been installed on a Boise substation feeder in preparation for reducing the substation operating voltage.

- If the pilot demonstration and load research are successful, a saving of 1–3% per feeder is anticipated.

- The HVRs have produced some interference with AM radio and television channel 2. These interference issues have not been resolved by the manufacture, so the HVR has been removed. The research meter connection to the customer phone line has produced undesirable phone interference.

Plan for 2006

The substation pilot demonstration project will be expanded during 2006 and the remaining HVRs will be installed. Preliminary study results should be available by the end of 2006.

Other Conservation and Renewable Discount Expenses

In addition to general BPA C&RD general support expenses, in 2005 Idaho Power provided funding through the C&RD to the Regional Technical Forum (RTF) in the amount of $25,000. The RTF serves as a regional resource for energy conservation, focusing on savings estimates and technical standards. The RTF's work is in the public domain and Idaho Power frequently consults with the RTF to support Idaho Power DSM evaluations.

Small Project/Education Fund

CoolTrol

Idaho Power participated in a demonstration for the field-testing of CoolTrol, a new retail refrigeration system control technology.

Two CoolTrol systems were installed as demonstration projects in the Boise metropolitan area during 2005. Idaho Power paid $9,570 (the hardware cost of one system). The total project cost was $21,430.

Expected total energy savings from these two systems is approximately 64,000 kWh/yr (just less than 10% of total store energy use). Early performance results are on track to meet the initial savings estimate. The system is under evaluation by the retailer for potential territorial expansion.

Habitat for Humanity Air Conditioning Unit

In 2005, Idaho Power contributed $2,844 from rider funds toward the incremental cost of a high-efficiency heat pump at a newly constructed single-family home in Caldwell, Idaho. This was the first ENERGY STAR® certified home constructed by the Canyon County Habitat for Humanity. The installed unit was a 2-ton, York "Olympian" 14 SEER, 9.0 HSPF.

This unit, along with the other efficiencies provided within the ENERGY STAR® guidelines is expected to provide about 14,000 kWh of energy savings and 1.7 kW demand savings over a similar code-built home with a 10 SEER, 6.8 HSPF heat pump.

Residential Education Support

During 2005, Idaho Power provided funding for several general education opportunities in Idaho Power's service area. Idaho Power was a sponsor and helped organize the Sustainability in the Inland Northwest Conference, and also provided funding for the City of Boise Community Energy Efficiency Workshop.

Energy Efficiency Advisory Group

The EEAG was formed in May 2002 to provide input on formulating, implementing, and evaluating energy efficiency and demand reduction programs that are funded by the Riders in Idaho and Oregon. The EEAG currently consists of 12 members from across Idaho Power's service area and the Northwest. Members represent a cross-section of customers including residential, industrial, commercial, irrigation, the elderly, low income, state agencies, the environment, the public utility commissions, and representatives from Idaho Power.

In 2005, the EEAG met three times, on January 28, April 20, and August 17. In the meetings, Idaho Power provided a status of the DSM Riders' (both Idaho and Oregon) funding and expenses, provided updates on ongoing programs and projects, requested recommendations on new program proposals and provided information to the group on DSM issues.

Customer representative members of EEAG are generally asked to serve for a three-year term. The 2005 April meeting marked three years since the group was formed, so eight of the original members rotated off the group. Rotating the customer representatives provides an opportunity for Idaho Power to get diverse customer input and provides the opportunity for more of our customers to provide input. In order to make the working group more manageable, the number of representatives for each of the four customer segments was reduced from two to one per segment. Four new customer representatives have been or are being added to the group. Also, a member representing the OPUC was added in August coincident with the implementation of the Rider in Oregon. Meeting minutes and other meeting materials are provided to all EEAG members and are available upon request.

One of the primary functions of the EEAG in 2005 was to review the six major DSM programs selected for implementation in the 2004 IRP. The programs presented to the EEAG for review throughout 2005 were each in various stages of implementation. For example, Commercial Building Efficiency was introduced to the EEAG for the first time, A/C Cool Credit and Irrigation Peak Rewards were both pilot programs in 2004 that were expanded to full programs in 2005, Industrial Efficiency and Irrigation Efficiency Rewards were existing programs that received major program enhancements in 2005, and the sixth program, ENERGY STAR® Homes Northwest, is an ongoing program with no major changes planned in 2006. Finally, the EEAG reviewed presentations about the expansion of DSM programs into Idaho Power's Oregon service area and the subsequent Rider funding proposal in Oregon.

EEAG Program Recommendations

The following section provides a review of the input provided to Idaho Power by the EEAG regarding major program implementation and operational issues in 2005. Please note that all DSM programs the company is operating have been reviewed by EEAG; however, only those suggestions where substantial changes or modifications to the program were received have been included below.

Commercial Building Efficiency Program

Idaho Power presented proposals to the EEAG during the January and April meetings to implement a program targeted to the commercial building sector. This program, launched in the spring of 2005, is available to commercial customers building new facilities or planning major renovations. The program encourages customers to build new buildings with specific components that would make the

building more energy efficient than current code and reduce summer peak. The EEAG had the following guidance:

- Because the initial budget appeared small, and it was thought there might be pent-up demand for this program, there were concerns that the original budget was inadequate.

  Idaho Power's budget for this program was taken from the IRP approved expenditure stream. If it appeared that demand for the program necessitated more funding, Idaho Power was prepared to shift additional funding to this program.

- A suggestion was made to distribute brochures about this program at the county permit offices and to involve the Boise State University (BSU) construction management school.

  Idaho Power has placed program brochures at several of the county permit offices where there is a lot of construction growth. Idaho Power coordinated with BSU's Center for Professional Development getting program stories added to their monthly newsletter and added the program head for their Center for Construction Technology to the monthly electronic Building Efficiency Update.

- Because the program was offering incentives for several newer measures, the basic design of the program was to make the initial offering valid only through the end of 2005. There was a concern that the transition to 2006 might not be smooth.

  Idaho Power did decide in early fourth quarter 2005 to extend the same incentive structure though 2006. That decision was widely reported to program participants, the local design community, and Idaho Power's field staff.

- It was suggested that information regarding the payback for various measures be included in the marketing material.

  Paybacks for most technologies vary widely depending on operating hours and the cost of the system being installed. Idaho Power decided, at this time, not to provide a payback number for each measure since it may not have much meaning to the customer.

- Several members suggested that the company consider incentive "bonuses" for early adopters.

  Idaho Power provided two Green Building wall calendars (featuring attractive photos of U.S. Leadership in Energy and Environmental Design (LEED) gold and platinum projects) for everyone who submitted their final application by December 15th. The intent of the free calendar was to encourage customers to apply by the end of the year. Two copies were provided, one for the owner and one to share with a key person on his/her design team.

- Several members suggested including a commissioning option in the program list of measures.

  Idaho Power has included commissioning as a measure in the program. The program offers an additional incentive of as much as $4,000 for whole building commissioning and less for system specific commissioning.

- It was suggested that Idaho Power provide clarity where there may be crossover between the commercial and industrial programs.

  The program eligibility is clear except for a few large commercial customers that qualify for both programs. Idaho Power decided to allow customers to choose which program they wish to participate in but after that point they are not eligible for the other program. This process has worked fairly well thus far.

Generally the EEAG group was supportive of the final design of the Commercial Building Efficiency program and thought it had high potential for significant participation because it was simple and straightforward for customers to participate.

Irrigation Peak Rewards

During the April 2005 EEAG meeting, Idaho Power presented the details of the Irrigation Peak Rewards program. The company had conducted a pilot of this program in 2004 with input from the EEAG. The program structure presented at the meeting was for the full rollout structure to be implemented in the summer of 2005. This program was one of six selected for implementation in the 2004 IRP.

- It was suggested that Idaho Power might want to survey the customers to determine the reasons why they did or did not participate in the pilot program.

  As part of the year-end program review, Idaho Power did survey customers on this question. Please see Irrigation Peak Rewards, Final Report, December 1, 2005 for the survey findings.

- It was suggested that more flexibility in the program would be an improvement from the customer's perspective.

  Idaho Power designed three options with the intent to provide flexibility while reducing the probability of free ridership. Also, Idaho Power wanted to keep the program simple for the first year, with the idea that additional options could be included at a later time if deemed appropriate.

The EEAG group was supportive of the final design of the Irrigation Peak Rewards program.

Irrigation Efficiency Rewards

Idaho Power presented a proposal to the EEAG during the August meeting to redesign the program available to the irrigation sector and to rename the program Irrigation Efficiency Rewards. This program, which was selected by the 2004 IRP, provides incentives to make irrigation systems more efficient. The EEAG had the following guidance:

- It was noted that irrigation dealers are often considered local experts in irrigation system design. It was suggested that Idaho Power incorporate local dealers into the program delivery mechanism.

  Idaho Power, through the field Agriculture Representatives, has educated most of the dealers on program specifics and plans to work closely with these important program partners in the future.

- There was a discussion on how to capture the energy efficiency potential of dairies.

  The irrigation systems of dairy farms are eligible for the Irrigation Efficiency

Rewards program. Energy savings opportunities for the non-irrigation load of dairies will be evaluated in the commercial efficiency program area.

The group unanimously supported proceeding with the program and provided further suggestions including evaluating alternative energy sources, focusing on customer satisfaction, and ensuring that the program has strong marketing support.

Oregon School Efficiency Program

During the August 2005 meeting, Idaho Power discussed the program structure for a new program offering in Oregon, the Oregon School Efficiency Program. This program partners with the ODOE audit and evaluation program.

- The EEAG suggested that the program try to align with school budget and operating cycles.

Idaho Power has designed this program to be flexible so that schools with long planning horizons can participate.

- There were questions from the group regarding what programs other Oregon utilities are offering to schools.

Idaho Power will review this information as the company proceeds forward.

Savings with a Twist

During the August 2005 EEAG meeting, Idaho Power presented program details regarding participation in a region-wide CFL promotion program. This program was available to all electric utilities in the Pacific Northwest during the fall months.

- Suggestions were made for possible marketing efforts including media outreach and radio shows, Habitat for Humanity, and Spanish ads.

A marketing plan including print and radio ads was executed for this program.

- There were questions on Idaho Power providing Vending Miser and refrigerator efficiency programs.

Programs like these for existing customers were not selected by the 2004 IRP, nor was there a turnkey option available to Idaho Power. The Savings with a Twist program was considered because it was offered turnkey and would be easy and relatively inexpensive to implement.

The EEAG gave general support to proceed with this program.

General EEAG Recommendations

EEAG members had a few suggestions for how the group could be more effective with the time and information available.

- A member commented that even though financial and energy savings information is provided at the meetings it would be helpful to include this data in future minutes.

Idaho Power is evaluating how to best provide this information in a timely manner to the EEAG.

- It was suggested that data be put out on the Web site or that all handouts be posted for members to access online. It was also suggested that any handouts that are e-mailed be in PDF format.

Those suggestions will be considered.

Appendix 1. Idaho Rider, Oregon Rider and BPA Account Balances

Idaho Energy Efficiency Rider

Total Funding and Accrued Interest May 2002–December 2004	$ 6,909,186.45
2005 Funding plus Accrued Interest	$ 5,866,997.14
Funding through 2005	$ 12,776,183.59
Total Expense—Inception through December 2004	$ (2,095,464.83)
2005 Expenses	$ (4,533,878.06)
Total Rider Expenses	**$ (6,629,342.89)**
2005 Year-End Balance	**$ 6,146,840.70**

Oregon Energy Efficiency Rider

Total Funding and Accrued Interest Beginning Balance (August 2005)	$ 141,089.64
2005 Funding plus Accrued Interest	$ 105,217.50
Funding through 2005	$ 246,307.14
Total Rider Expenses	**$ (31,472.83)**
2005 Year-End Balance	**$ 214,834.31**

BPA Funding

Total Funding and Accrued Interest October 2001–2004	$ 1,735,594.33
2005 Funding plus Accrued Interest	$ 530,186.51
Funding through 2005	$ 2,265,780.84
Total Expense—Inception through December 2004	$ (1,479,628.70)
2005 Expenses	$ (612,486.08)
Total Expenses	**$ (2,092,114.78)**
2005 Year-End Balance	**$ 173,666.06**

Appendix 2. 2005 DSM Expenses by Funding Source (Dollars)

Sector/Program	Rider Idaho	Rider Oregon	BPA Funded	IPC O&M	Total Program
Demand Response					
Residential					
A/C Cool Credit	718,066	–	–	35,996	**$ 754,062**
Irrigation					
Irrigation Peak Rewards	1,435,581	–	–	32,700	**$ 1,468,282**
Demand Response Total	2,153,647	–	–	68,696	**$ 2,222,344**
Energy Efficiency					
Residential					
Energy House Calls	–	–	375,346	265	**$ 375,610**
ENERGY STAR® Homes Northwest	247,071	–	–	6,034	**$ 253,105**
Oregon Residential Weatherization	–	351	–	261	**$ 612**
Rebate Advantage	–	–	45,993	180	**$ 46,173**
Savings with a Twist	73,152	–	–		**$ 73,152**
Weatherization Assistance	–	–	76,736	1,370,099	**$ 1,446,835**
Commercial					
Commercial Building Efficiency	186,290	–	–	7,776	**$ 194,066**
Oregon Commercial Audit	–	2,975	–	2,475	**$ 5,450**
Oregon School Efficiency	–	86	–		**$ 86**
Industrial					
Industrial Efficiency	1,125,470	2,486	–	120	**$ 1,128,076**
Irrigation					
Irrigation Efficiency Rewards	103,823	–	–	46,754	**$ 150,577**
Energy Efficiency Total	1,735,807	5,898	498,075	1,433,964	**$ 3,673,744**
Market Transformation					
Alliance	441,409	23,231	–	12,250	**$ 476,891**
Market Transformation Total	441,409	23,231	–	12,250	**$ 476,891**
Other Programs and Activities					
Residential					
Residential Education Initiative	–	–	7,128	370	**$ 7,498**
Commercial					
Building Operator Training	1,750	–	–		**$ 1,750**
Commercial Education Initiative	–	–	3,497		**$ 3,497**
Other					
Distribution Efficiency Initiative	15,470	–	–	6,082	**$ 21,552**
Other C&RD Expenses	–	–	101,065	112	**$ 101,177**
Small Project/Education Funds	14,896	–	–		**$ 14,896**
Other Programs and Activities Total	32,116	–	111,690	6,564	**$ 150,370**
Indirect Program Expense					
DSM Analysis and Accounting	158,577	2,266	–	1,661	**$ 162,504**
EEAG Meetings	1,174	18	–		**$ 1,191**
Special Accounting Entries	11,148	60	2,721		**$ 13,929**
Indirect Program Expense	170,899	2,344	2,721	1,661	**$ 177,624**
Totals	**$4,533,878**	**$31,473**	**$612,486**	**$1,523,136**	**$ 6,700,973**

Appendix 3. 2005 DSM Program Activity

2005 DSM Program Activity		Participants		Costs		Savings		Measure Life	Nominal Levelized Costs(3)	
Program	State			Total Utility Cost(1)	Total Resource Cost(2)	Annual Energy	Summer Peak Demand	Years	Utility	Total Resource
		Number	Units	*(dollars)*	*(dollars)*	*(kWh)*	*(kW)*		*($/kWh)*	*($/kWh)*
Demand Response										
Residential										
A/C Cool Credit	ID	2,369	A/C units	$754,062	$717,902		2,748	10		
Irrigation										
Irrigation Peak Rewards	ID	894	service points	$1,468,282	$479,484		40,323	10		
Energy Efficiency										
Residential										
Energy House Calls	ID/OR	891	homes	$375,610	$375,610	1,775,770		20	$0.018	$0.018
ENERGY STAR® Homes Northwest	ID	203	homes	$253,105	$1,014,335	421,834		25	$0.046	$0.188
Oregon Residential Weatherization	OR	4	customers	$612	$3,608	7,927		25	$0.006	$0.036
Rebate Advantage	ID/OR	98	homes	$46,173	$158,462	312,311		45	$0.010	$0.034
Savings with a Twist	ID	35,008	CFL bulbs	$73,152	$107,810	1,386,317		9	$0.007	$0.011
Weatherization Assistance - OR	OR	28	homes	$44,348	$44,348	94,279		25	$0.036	$0.036
Weatherization Assistance - ID	ID	598	homes	$1,402,487	$1,402,487	3,179,311		25	$0.034	$0.034
Commercial										
Commercial Building Efficiency	ID	12	projects	$194,066	$233,149	494,239		30	$0.028	$0.035
Oregon Commercial Audit	OR	7	audits	$5,450	$5,450			7		
Oregon School Efficiency	OR			$86	$86					
Industrial										
Industrial Efficiency	ID	24	projects	$1,128,076	$3,653,152	12,016,678		12	$0.010	$0.034
Irrigation										
Irrigation Efficiency Rewards	ID	38	customers	$150,577	$657,460	1,012,883		15	$0.014	$0.064
Market Transformation										
Alliance	ID/OR			$476,891	$476,891	20,053,756				
Other Programs and Activities										
Residential										
Residential Education Initiative	ID/OR			$7,498	$7,498					
Commercial										
Building Operator Training	ID	7	students	$1,750	$4,480	434,167		5	$0.001	$0.002
Commercial Education Initiative	ID			$3,497	$3,497					
Other										
Distribution Efficiency Initiative	ID/OR			$21,552	$21,552					
Other C&RD	ID/OR			$101,177	$101,177					
Small Project/Education Funds	ID/OR	2	customers	$14,896	$26,756	78,000		10	$0.024	$0.044
Total Program Direct Expense				**$6,523,349**	**$9,495,196**	**41,267,472**	**43,071**			
Program Indirect Expense				**$177,624**						
Total DSM Expense				**$6,700,973**						

(1) Total Utility Costs - Idaho Power program direct and support costs
(2) Total Resource Costs = Total Utility Costs plus total Participant Costs net of incentives received
(3) Levelized Cost calculation increases kWh savings by 10.9% to account for line losses

Ver 2

Appendix 4. Financial Factors for DSM—2006 IRP

Initial Data									
	Weight	Cost		Weighted Cost					Adjust-ment
Capital		Pre-tax	Post-tax	Pre-tax	Post-tax	Discounting	Rate	Timing Factor	Factor
Debt	50.538%	5.651%	3.441%	2.856%	1.739%	Nominal	7.304%	0.5	1.03588
Preferred	0.000%	0.000%	0.000%	0.000%	0.000%	Escalation	3.000%	1.0	1.03000
Common	49.462%	11.250%	11.250%	5.564%	5.564%	Real	4.178%		1.00570
	100.000%			8.420%	7.304%	Revenue Requirements	7.304%	0.5	
Tax Factors						Deferred tax rate		35%	
	Composite income tax rate			39.10%		Tax life (yrs)		1	
	Property tax %			41.00%		Declining balance rate (DBR)		100%	
	Deferred tax switch (true/false)			TRUE		Tax timing (months in 1st yr)		12	

Inputs in white

A	B	C	D	E	F	G
	Present Value Factor (PVF)		**Capital Recovery Factor (CRF)**		**Conversion Factor**	
Number of Years	Present Value of $1 per Year		Amount per Year with Present Value of $1		Nominal to Real	Nominal to 30-yr Nominal
	Nominal	Real	Nominal	Real		
(n)			*(1 ÷ B)*	*(1 ÷ C)*	*(E ÷ D)*	*(F ÷ F(30))*
1	0.96537	0.96537	1.035875	1.035875	1.000000	1.364716
2	1.86503	1.89202	.536186	.528537	.985735	1.345248
3	2.70345	2.78150	.369898	.359518	.971940	1.326422
4	3.48480	3.63531	.286960	.275080	.958600	1.308216
5	4.21297	4.45487	.237362	.224473	.945701	1.290613
6	4.89158	5.24156	.204433	.190783	.933230	1.273594
7	5.52400	5.99670	.181028	.166758	.921173	1.257140
8	0.00000	6.72155	.163576	.148775	.909518	1.241233
9	6.66263	7.41733	.150091	.134819	.898251	1.225857
10	7.17450	8.08521	.139383	.123683	.887361	1.210995
11	7.65153	8.72630	.130693	.114596	.876836	1.196631
12	8.09609	9.34167	.123516	.107047	.866664	1.182750
13	8.51039	9.93236	.117503	.100681	.856834	1.169335
14	8.89649	10.49937	.112404	.095244	.847336	1.156372
15	9.25631	11.04363	.108034	.090550	.838158	1.143848
16	9.59164	11.56606	.104257	.086460	.829292	1.131748
17	9.90414	12.06754	.100968	.082867	.820726	1.120058
18	10.19537	12.54890	.098084	.079688	.812452	1.108766
19	10.46678	13.01096	.095540	.076858	.804459	1.097858
20	10.71972	13.45448	.093286	.074325	.796740	1.087323
22	11.17512	14.28888	.089485	.069984	.782085	1.067323
24	11.57063	15.05769	.086426	.066411	.768420	1.048675
25	11.74843	15.41913	.085118	.064855	.761939	1.039830
26	11.91413	15.76607	.083934	.063427	.755682	1.031291
28	12.21247	16.41876	.081884	.060906	.743812	1.015092
30	12.47157	17.02015	.080182	.058754	.732753	1.000000
32	12.69660	17.57426	.078761	.056901	.722454	0.985945
35	12.97990	18.32484	.077042	.054571	.708323	0.966659
38	13.20920	18.98868	.075705	.052663	.695635	0.949344
40	13.33723	19.38805	.074978	.051578	.687910	0.938801
42	13.44843	19.75603	.074358	.050617	.680725	0.928996
45	13.58842	20.25448	.073592	.049372	.670884	0.915567
48	13.70172	20.69533	.072984	.048320	.662068	0.903535
50	13.76499	20.96055	.072648	.047709	.656709	0.896222

Present Value Factor (PVF) for n years = Adjustment Factor × (1 - ((1 + Rate) ^ -n)) ÷ Rate
Real Discount Rate = ((1 + Nominal Rate) ÷ (1 + Escalation Rate)) - 1
Nominal Adjustment Factor = (1 + Nominal Rate) ^ Nominal Timing Factor
Escalation Adjustment Factor = (1 + Escalation Rate) ^ Escalation Timing Factor
Real Adjustment Factor = Nominal Adjustment Factor ÷ Escalation Adjustment Factor
For timing factors, use 0 for end of period (ordinary annuity), 1 for beginning of period (annuity due), and 0.5 for midpoint.

updated February 2006