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**LISA D. NORDSTROM**
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August 1, 2011

**VIA HAND DELIVERY**

Jean D. Jewell, Secretary
Idaho Public Utilities Commission
472 West Washington Street
P.O. Box 83720
Boise, Idaho 83720-0074

Re: Case No. IPC-E-11-05
*IN THE MATTER OF THE APPLICATION OF IDAHO POWER COMPANY FOR A PRUDENCY DETERMINATION OF 2010 ENERGY EFFICIENCY RIDER EXPENDITURES*

Dear Ms. Jewell:

Enclosed for filing please find an original and seven (7) copies of Idaho Power Company's Reply Comments in the above matter.

Very truly yours,

Lisa D. Nordstrom

Lisa D. Nordstrom

LDN:csb
Enclosures

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BEFORE THE IDAHO PUBLIC UTILITIES COMMISSION

| | | |
|---|---|---|
| IN THE MATTER OF THE APPLICATION OF IDAHO POWER COMPANY FOR A PRUDENCY DETERMINATION OF 2010 ENERGY EFFICIENCY RIDER EXPENDITURES. | ) | CASE NO. IPC-E-11-05<br><br>IDAHO POWER COMPANY'S REPLY COMMENTS |

Idaho Power Company ("Idaho Power" or "Company") respectfully submits the following Reply Comments in the above-captioned case.

## I.
## BACKGROUND

On March 15, 2011, Idaho Power filed an Application requesting a prudency determination related to Company expenditures in 2010 totaling $42,479,692 in Idaho Energy Efficiency Rider ("Rider") funds. On April 26, 2011, the Idaho Public Utilities Commission ("Commission") issued a Notice of Application and Notice of Modified Procedure, Order No. 32232, establishing a 60 day comment period and a 14 day reply comment period. On June 30, 2011, the Commission issued Order No. 32283 extending the comment period to July 18, 2011, and the reply comment period to August 1, 2011. In responding to Commission Staff ("Staff") production requests, Idaho

Power discovered that $526,781 of Rider funds had been inadvertently charged to the Idaho Energy Efficiency Tariff Rider rather than the Oregon Rider. On July 1, 2011, the Company filed a letter with the Commission explaining the error and reduced its request for a prudency determination in this case to $41,952,911 rather than $42,479,692. The Staff, Idaho Conservation League ("ICL"), Idaho Irrigation Pumpers Association, Inc. ("IIPA"), the Industrial Customers of Idaho Power ("ICIP"), and one member of the public submitted comments in this case. With the exception of Staff (as described in more detail below), none of the comments recommend a disallowance of 2010 Rider expenses.

## II.
## THE COMMISSION SHOULD ALLOW ALL RIDER RELATED LABOR COSTS.

Staff recommends that $120,070 of Rider expenses incurred in 2010 related to labor costs be disallowed in this case and only be deemed prudent pending the outcome of the Company's general rate case, Case No. IPC-E-11-08. While it is clear Staff is targeting Company employee wage increases as a policy matter and will most likely raise this issue in the Company's pending general rate case, the recommended disallowance is not appropriate in this demand-side resources ("DSM") prudency case. Accordingly, the Commission should deny Staff's disallowance recommendation.

The setting of prospective rates in a general rate case based upon a determination of prudent levels for salaries in a test year is very different than evaluating the prudency of past costs incurred. If the Commission determines that recoverable salary expenses are appropriately set at levels lower than those proposed by the Company in a general rate case, the Company has the ability to react to such a

Commission directive and prospectively adjust employee compensation and any other expenses disallowed or adjusted by Commission order. However, in this cost prudency review case, the Company has already spent the money. Idaho Power's pending rate case is based upon a 2011 test year; it does not apply to expenses incurred in 2010, such as the 2010 Rider expenses. A determination that past wage adjustments were not prudently incurred by the Company would require the Company to expense the $120,070 immediately, eliminating the opportunity for the Company to recover the full 2010 costs of the cost-effective DSM programs. Thus, if the Commission approves Staff's recommendation, the Company will have no mechanism to recover any of those expenses. This is a wholly inequitable result, and the Commission should deny Staff's recommendation.

In addition, Staff justifies its recommended disallowance by the fact that the Company has submitted a general rate case during the pendency of the prudency determination in this docket, thus giving the Commission an opportunity to examine Rider employees' salary adjustments in that context. However, tying the disposition of a specific expense to a finding in a particular general rate case filing poses significant practical problems on a going-forward basis. If the logic of Staff's recommendation is followed, it would suggest that the Company can only provide wage increases to employees paid for by Rider funds during years in which the Company files a general rate case. Again, this yields an inequitable result for the Company; the timing of when it chooses to file a general rate case should not dictate when Rider-funded employees should receive wage increases.

Importantly, all programs reviewed for prudency in this case were deemed cost-effective pursuant to the three cost-effectiveness tests required by the Memorandum of Understanding signed by the Company and Staff in Case No. IPC-E-09-09 ("DSM MOU"). Notably, each of those cost-effectiveness tests included the Rider employee salaries, inclusive of the wage increases at issue. Thus, the Company has met its obligation to provide cost-effective DSM measures even with the wage increases.

Moreover, the Company has fronted a significant amount of capital toward the Rider programs at its own risk with the anticipation that it will be allowed dollar-for-dollar cost recovery through the Rider. As pointed out above, the disallowance recommended by Staff, if granted, would require the Company to immediately expense the $120,070 at issue and there would be no mechanism for the Company to recover those funds. Put differently, if Staff's recommendation is granted, not only will the Company not have earned its allowed rate of return for investing millions of dollars in energy efficiency activities in 2010, the Company would be penalized by $120,070. Staff's recommended disallowance highlights the asymmetric risk and reward proposition for the Company's cost-effective energy efficiency efforts. On balance, the Commission should consider this lack of symmetry and conclude that Staff's recommendation is not warranted.

## III.
## THE COMMISSION HAS PREVIOULSY ACKNOWLEDGED CLASS CROSS-SUBSIDIZATION IS AN INHERENT PART OF ENERGY EFFICIENCY ACTIVITY.

Staff's Comments express concern that some customer classes receive a greater percentage of Rider fund benefits than they contribute. Staff Comments at 4. However, Staff concedes that "the Company should not discontinue more cost effective programs in one class in exchange for less cost effective programs in another class simply to

promote DSM revenue/program cost equity." *Id.* ICIP is especially critical as to what it perceives are inefficient energy efficiency programs for the residential class. ICIP Comments at 8-9.

The Commission has addressed the issue of class cross-subsidization in the energy efficiency context on two previous occasions. First, in Order No. 29065, the Commission directed the Company to "implement a balanced portfolio of DSM programs for all customer classes over the long-term . . . The energy savings generated by such an approach will indirectly benefit all ratepayers as more class-specific DSM programs are implemented over time." *Id.* at 8. Second, in Order No. 32113, the Commission stated, "An exact 'matching' of the costs and benefits for an individual DSM program is a worthy, albeit unrealistic, goal. There will always be some level of cross-subsidization of DSM programs occurring amongst and between a utility's various customer classes." *Id. at* 8-9.

Consistent with these Commission guidelines, Idaho Power maintains that all of its energy efficiency program savings and demand response peak savings in 2010 created system benefits for all customers, regardless of specific customer class measures. That said, the Company continues to work on this disparity, particularly in the residential class. Specifically, the Company currently offers eleven incentive programs targeted at the residential class which incentivizes those customers to lessen their home energy usage. In addition, the Company actively pursues the residential education initiative, which provides customers with information that can help them reduce their energy use through their own conservation actions.

## IV.
## THERE IS NO CONFLICT OF INTEREST BETWEEN THE DSM EVALUATION AND IMPLEMENTATION TEAMS.

Staff's Comments suggest that there is a conflict of interest with having the Energy Efficiency Program leaders and the Customer Research and Analysis leader report to the Manager of Customer Relations & Energy Efficiency. Staff Comments at 6-8. Staff alleges that it has identified specific examples in the *Demand-Side Management 2010 Annual Report* ("2010 DSM Report") where this perceived conflict of interest "could have produced questionable results." Staff Comments at 7.

Idaho Power disagrees with Staff's assertion. The Company offers energy efficiency programs to reduce the need for energy generation and to provide customers opportunities to reduce their energy use. Idaho Power has nothing to gain by gaming the efficacy of the cost-effectiveness of these programs. As the program administrator, the Company is charged with identifying any deficiencies that evaluations might highlight in the programs; this enables the Company to modify, improve, or discontinue any program that was not effective, providing transparency and satisfaction for all stakeholders.

The Staff cites examples alleging that certain programs had large budgets and low cost-effectiveness, that the Company's evaluations of certain programs were strategically delayed, and that the evaluations delivered in the 2010 DSM Report were designed to highlight implementation successes and minimize deficiencies. The Company disagrees with these assertions. The 2010 DSM Report shows that all of the Company's DSM programs met the Staff-approved cost-effectiveness tests set forth in the DSM MOU. A change to the Company's internal employee reporting structure

would not change the cost or cost-effectiveness of these programs. Further, Staff's suggestion that the evaluations of Idaho Power's demand response programs could have been strategically delayed are completely unfounded and inaccurate. Idaho Power has begun and continues to conduct evaluations of all of its demand response programs on a routine and regular basis, including third-party evaluations. In fact, in production request responses in this case, the Company provided copies of third-party reviews of the A/C Cool Credit as well as Company reviews of the Irrigation Peak Rewards and FlexPeak programs. While the Company is and continues to remain open to suggestions to improve its energy efficiency activities, it does not find unfounded criticisms of its programs to be constructive. Accordingly, the Commission should disregard the unsubstantiated allegations related to the Company's purported conflict of interest made by Staff in its Comments in this proceeding.

## V.
## THE COMPANY IS APPROPRIATELY ADMINISTERING ITS DEMAND RESPONSE PROGRAMS.

Staff was critical of all three of the Company's demand response programs.

First, with regard to the Irrigation Peak Rewards program, Staff asserts that it did not "appear to have interrupted irrigators as frequently as it could have to avoid relying on incremental cost generation resources." Staff Comments at 7. As described in the Company's 2009 Integrated Resource Plan ("2009 IRP"), the goal of demand response programs is to reduce summer peak electric load during periods of high demand and minimize or delay the need to build new supply-side resources. 2009 IRP at 47. Demand response programs, like the Irrigation Peak Rewards program, were not designed by Idaho Power to reduce real time power supply costs. The design of

demand response programs aligns with the IRP planning process where these programs are intended to fill a need when demand is high and resources are short or non-existent. It is difficult to justify extreme need if the Company is not running its supply-side resources and real time wholesale market prices are well below what customers are paying through their rates. In addition, because of the few hours these programs are available and the fact that much of the energy use is shifted to a different time period, not reduced, presents limited opportunity to reduce real time power supply costs.

Second, Staff's Comments point out that the expenses for the FlexPeak program rose dramatically without a subsequent increase in demand reduction and that Idaho Power did not explain this in the 2010 DSM Report. Staff Comments at 7. During the first year of the program, EnerNOC Inc. ("EnerNOC"), the program's third-party contractor, provided more demand reduction than it was committed to provide. In 2009, EnerNOC was compensated for the three-month average of only 7.4 megawatts ("MW") while actually providing a maximum of 17.1 MW (a 230% difference), giving Idaho Power a lower-cost resource in the first year. In contrast, in 2010, the three-month average was 31.0 MW while providing an actual reduction of 42.1 MW (a 135 percent difference). Subsequently, the costs better aligned with EnerNOC's commitment in terms of performance in 2010. On page 82 of the *Demand-Side Management 2009 Annual Report*, the Company noted that in 2009 EnerNOC's initial goal was to achieve 2 MW of demand reduction and that lower expenses and higher demand reduction contributed to the program's cost-effectiveness in year one. In response to Staff's Production Request No. 17 in this case, Idaho Power addressed the difference in the

cost per megawatt between 2009 and 2010 and the fact that the Company is only required to compensate EnerNOC for 10 percent of its demand reduction above the nominated amount. Thus, Staff's assertion that the costs were high without any explanation is not entirely accurate.

Third, Staff states that the A/C Cool Credit program "continues to suffer from low cost-effectiveness ratios . . .," and suggests that giving demand response programs a twenty-year life is "generous." Staff Comments at 7. ICIP levels similar criticisms against the FlexPeak Management program, suggesting that the use of a different program life somehow creates undervaluation of the program. ICIP Comments at 8. Importantly, regardless of the program life used in the cost-effective analysis of demand response programs, they are all cost-effective from a program life perspective and from a one year perspective. As noted in *Supplement 1: Cost-Effectiveness* to the 2010 DSM Report "For 2010, A/C Cool Credit, FlexPeak Management, and Irrigation Peak Rewards passed the B/C test with TRC's of 1.23, 1.33, and 1.12 respectively." *Id. at* 3. Thus, both Staff's and ICIP's criticisms in this regard are unfounded.

ICIP is also critical of the Company's demand response programs, suggesting that the Company should use inputs from its 2011 IRP to analyze and value its programs. The Company's Application, which was filed on March 15, 2011, seeks recovery of expenses incurred in 2010. The 2011 IRP, filed on June 30, 2011, is still pending before the Commission. ICIP effectively recommends that the Company conduct a forward-looking analysis based on the 2011 IRP for expenses incurred in calendar year 2010. The cost-effective analysis for an after-the-fact prudency review is based on the inputs from the most recent IRP acknowledged by the Commission and

other information that is the best information known at the time that the funds were utilized, in this case 2010. Thus, the appropriate IRP for the 2010 prudency review is the Company's acknowledged 2009 IRP. The Company cannot use the inputs from the 2011 IRP until the Commission acknowledges it. Once acknowledged, the Company will begin using the 2011 IRP inputs in its DSM research and analysis. Accordingly, the Commission should reject ICIP's recommendation to rerun its cost-effectiveness tests with 2011 IRP data.

ICIP also complains that the Company used third-party evaluators for nine process evaluations in 2010 but did not use third-party evaluators to conduct actual cost-effectiveness reviews of programs. Idaho Power follows the DSM MOU regarding cost-effectiveness, which includes no requirement to use third-party evaluators to conduct cost-effectiveness evaluations. In accordance with the DSM MOU section 5.a, Idaho Power plans to undertake process and impact evaluations of all substantial programs on a reasonable and frequent cycle, two to three years.

ICIP also contends that Idaho Power had put a "cap" on its demand response programs in the 2011 IRP to justify the acquisition of new supply-side resources. ICIP Comments at 3-6. As stated in the Company's Response to ICIP's Request for Production No. 6.b:

> As long as system demand is growing, Demand Response programs are not intended to, nor are they capable of, eliminating the need for all new resources. Demand Response, as a resource in a system with growing demand, is intended to defer new resources and only satisfy deficits that occur within the program operating parameters. At some point, the deficits become too large and out of scope for demand response programs.

The results of Idaho Power's 2011 IRP analysis, conducted in the fall of 2010, demonstrated 351 MW (the cap claimed by ICIP) was a reasonable estimate of the demand response potential which could economically reduce Idaho Power's future peak demands. The fact of the matter, however, is that the Company has not set a cap. Subsequent to the 2011 IRP analysis and the issuance of Order No. 32200, without any restricting or capping of its demand response programs for the summer of 2011, Idaho Power has achieved approximately 400 MW of demand reduction potential through the administration of its DSM programs. This is an increase over 100 MW from 2010.

## VI.
## IDAHO POWER SHOULD NOT HAVE TO FILE AN ADDENDUM TO THE 2010 DSM REPORT.

Commission Staff recommends that the Company file an addendum to the 2010 DSM Report that "includes an explanation of the changes to its program life benefit-cost ratio methodology, a revised Appendix 4 with correction highlighted, and an explanation of how the Company's accounting practices have been improved to prevent the incorrect allocation of prgram expenses." Staff Comments at 9. While the Company agrees with Staff that Idaho Power should explain these three items, the Company asserts it can be done in these Reply Comments and that there is no need to file an addendum. Attachment No. 1 is a revised version of Appendix 4 per Staff's request. Further, the Company offers the following explanations for the revisions.

### A. The Company Modified Its Benefit/Cost Ratio Methodology As Part of Its Continuing Efforts to Enhance Its DSM Programs.

After consulting with the Company's financial analyst and power supply analyst, the Company changed its method of calculating the program life cost-effectiveness ratios in 2010 in an effort to more accurately reflect the present value of the costs and

benefits of a program. While Idaho Power admittedly should have explained this change in methodology in the 2010 DSM Report, Idaho Power met with Staff and ICIP on July 8, 2011, for a workshop where the Company explained the change in methodology used in program life cost-effectiveness. At that time, Idaho Power also demonstrated that every Idaho energy efficiency program is cost-effective under either calculation for its program life from the utility cost and the total resource cost perspective.

In its 2009 DSM Report, Idaho Power calculated the program life benefit/cost (B/C) ratios by using the discounted (or present valued) stream of avoided costs through a program's measure life divided by the discounted stream of costs from year one of a program to the present year. The economic inputs for the discounting came from the 2009 IRP. In the 2010 DSM Report, the Company used the sum of the actual historic annual avoided costs plus the sum of the discounted future avoided costs divided by the sum of the actual costs from year one to the present year (2010) to calculate the program life B/C ratios. The economic inputs for the discounting came from the 2009 IRP.

## B. The Company Has Recently Updated and Automated Its Processes For DSM Programs For Efficiency and Accuracy.

Staff's Comments note that the 2010 DSM Report contained some errors. As indicated above, Idaho Power was aware of the accounting error and correspondingly updated its prudency request in this docket through a letter dated July 1, 2011. Importantly, throughout 2010, the Company developed a data repository, which was implemented in 2011. *See* Case No. IPC-E-10-09, Reply Comments of Idaho Power Company. All of Idaho Power's energy efficiency programs have been migrated to this

new platform, creating new automated uploading processes. Prior to the implementation of this system, the tracking and automatic upload of payments were submitted through databases in which the accounting data was manually entered. Although extensive checks and balances existed in the previous systems, all reconciliation had to be performed by manually checking each charge to see that it contained the correct accounting. With the new system, the likelihood of incentives being charged to the wrong jurisdiction is greatly diminished, if not eliminated.

## VII.
## THE COMPANY HAS COMPLIED WITH THE COST-EFFECTIVENESS TESTS SET FORTH IN THE DSM MOU.

Despite the Company demonstrating that each of its energy efficiency programs satisfied all of the cost-effectiveness tests required by the DSM MOU, ICIP is especially critical of the fact that some of the Company's programs failed to meet the Ratepayer Impact Measurement ("RIM") test. Specifically, ICIP asserts "that the limited process evaluations do little to dispel ICIP's concern that the residential program has a serious free rider problem," citing a Global Energy Partners ("GEP") report ("GEP Report") to support its position. ICIP Comments at 9. Further, ICIP urges the Commission to require Idaho Power to engage a qualified third-party to fully evaluate the cost-effectiveness of each of its residential programs, including any free-rider problems. As an initial matter, free riders are program participants who would have taken action without program incentives and spillover accounts for actions taken as a result of a program, but without an incentive. The net to gross ("NTG") ratio is a factor that is multiplied by a program's gross savings to identify an estimate of net savings, often to adjust for various factors such as free ridership and spillover. It must be noted that

determining utility-specific, program-specific free ridership and spillover is a very labor intensive and expensive process. When Idaho Power contracted with GEP to conduct process evaluations of its residential programs, it was asked to identify if sufficient information was available to make a reasonable estimation of free ridership and, if not available, to provide recommendations on how to estimate free ridership. In its report, GEP provided several recommendations to help the Company estimate free ridership in this process evaluation. GEP Report at 7-4. One of GEP's recommendations was to use "deemed" NTG values from established third-party sources when estimating free ridership. The Company currently uses such deemed NTG ratios based on program type in calculating cost-effectiveness. These sources and NTG ratios are noted in the *Demand-Side Management 2010 Annual Report, Supplement 1: Cost-Effectiveness.* Thus, the Company is actively engaging on the free ridership issue.

## VIII.
## CONCLUSION

In 2010, Idaho Power's DSM efforts continue to show increased participation and energy savings as well as positive cost-effective performance of programs. All energy efficiency programs produced savings at a benefit/cost ratio of greater than one when analyzed from the perspectives of total resource cost, utility cost, and participant cost. The Company takes significant risks by spending substantial amounts every year on its DSM initiatives with no guarantee of cost recovery. Staff's proposed disallowance of certain labor costs is unwarranted and inequitable. While the Commission has acknowledged certain cross-subsidization is inherent in the Company's energy efficiency activities, Idaho Power has demonstrated that each of its programs exceed the required cost/benefits ratios. While the Company misallocated some Oregon funds

to the Idaho jurisdiction, it corrected the error and has implemented new automated systems which should minimize the risks of similar occurrences happening in the future.

Accordingly, Idaho Power respectfully requests that the Commission issue an Order designating Idaho Power's expenditure of $41,952,911 in Idaho Energy Efficiency Rider funds in 2010 as prudently incurred expenses.

DATED at Boise, Idaho, this 1st day of August 2011.

Lisa D. Nordstrom for

JASON B. WILLIAMS
Attorney for Idaho Power Company

## CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 1st day of August 2011 I served a true and correct copy of IDAHO POWER COMPANY'S REPLY COMMENTS upon the following named parties by the method indicated below, and addressed to the following:

| | |
|---|---|
| **Commission Staff**<br>Weldon B. Stutzman<br>Deputy Attorney General<br>Idaho Public Utilities Commission<br>472 West Washington<br>P.O. Box 83720<br>Boise, Idaho 83720-0074 | _X_ Hand Delivered<br>____ U.S. Mail<br>____ Overnight Mail<br>____ FAX<br>_X_ Email weldon.stutzman@puc.idaho.gov |
| **Industrial Customers of Idaho Power**<br>Peter J. Richardson<br>Gregory M. Adams<br>RICHARDSON & O'LEARY, PLLC<br>515 North 27th Street<br>P.O. Box 7218<br>Boise, Idaho 83702 | ____ Hand Delivered<br>_X_ U.S. Mail<br>____ Overnight Mail<br>____ FAX<br>_X_ Email peter@richardsonandoleary.com<br>greg@richardsonandoleary.com |
| Dr. Don Reading<br>Ben Johnson Associates<br>6070 Hill Road<br>Boise, Idaho 83703 | ____ Hand Delivered<br>_X_ U.S. Mail<br>____ Overnight Mail<br>____ FAX<br>_X_ Email dreading@mindspring.com |
| **Idaho Conservation League**<br>Benjamin J. Otto<br>Idaho Conservation League<br>710 North Sixth Street<br>P.O. Box 844<br>Boise, Idaho 83701 | ____ Hand Delivered<br>_X_ U.S. Mail<br>____ Overnight Mail<br>____ FAX<br>_X_ Email botto@idahoconservation.org |
| **Idaho Irrigation Pumpers Association**<br>Lynn S. Tominaga, Executive Director<br>Idaho Irrigation Pumpers Association<br>1109 West Main, Suite 300<br>P.O. Box 2624<br>Boise, Idaho 83701-2624 | ____ Hand Delivered<br>_X_ U.S. Mail<br>____ Overnight Mail<br>____ FAX<br>____ Email |

Lisa D. Nordstrom for
Jason B. Williams

# BEFORE THE

# IDAHO PUBLIC UTILITIES COMMISSION

# CASE NO. IPC-E-11-05

# IDAHO POWER COMPANY

# ATTACHMENT NO. 1

# REVISED APPENDIX 4

IDAHO POWER®
An IDACORP Company

# Demand-Side Management 2010 Annual Report

## Revised Appendix 4

July 8, 2011

## **Appendix 4.** DSM expense and performance 2002–2010 REVISED July 8, 2011

| Program/Year | Participants | Total Costs: Utility[c] | Total Costs: Resource[d] | Savings and Demand Reduction: Annual Energy (kWh) | Savings and Demand Reduction: Average Energy[e] (aMW) | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs [a]: Total Utility ($/kWh) | Levilized Costs [a]: Total Resource ($/kWh) | Program Life Benefit/Cost Ratios[b]: Utility | Program Life Benefit/Cost Ratios[b]: Total Resource |
|---|---|---|---|---|---|---|---|---|---|---|---|
| A/C Cool Credit | | | | | | | | | | | |
| 2003 | 204 | $ 275,645 | $ 275,645 | | | 0.0 | | | | | |
| 2004 | 420 | 287,253 | 287,253 | | | 0.5 | | | | | |
| 2005 | 2,369 | 754,062 | 754,062 | | | 3.1 | | | | | |
| 2006 | 5,369 | 1,235,476 | 1,235,476 | | | 6.3 | | | | | |
| 2007 | 13,692 | 2,426,154 | 2,426,154 | | | 12.2 | | | | | |
| 2008 | 20,195 | 2,969,377 | 2,969,377 | | | 25.5 | | | | | |
| 2009 | 30,391 | 3,451,988 | 3,451,988 | | | 38.5 | | | | | |
| 2010 | 30,803 | 2,002,546 | 2,002,546 | | | 39.0 | | | | | |
| **Total** | | **$13,402,500** | **$13,402,500** | | | | | | | **1.11** | **1.11** |
| FlexPeak Management | | | | | | | | | | | |
| 2009 | 33 | 528,681 | 528,681 | | | 19.3 | | | | | |
| 2010 | 60 | 1,902,680 | 1,902,680 | | | 47.5 | | | | | |
| **Total** | | **$ 2,431,361** | **$ 2,431,361** | | | | | | | **1.14** | **1.14** |
| Irrigation Peak Rewards | | | | | | | | | | | |
| 2004 | 58 | 344,714 | 344,714 | | | 5.6 | | | | | |
| 2005 | 894 | 1,468,282 | 1,468,282 | | | 40.3 | | | | | |
| 2006 | 906 | 1,324,418 | 1,324,418 | | | 31.8 | | | | | |
| 2007 | 947 | 1,615,881 | 1,615,881 | | | 37.4 | | | | | |
| 2008 | 897 | 1,431,840 | 1,431,840 | | | 35.1 | | | | | |
| 2009 | 1,512 | 9,655,283 | 9,655,283 | | | 160.2 | | | | | |
| 2010 | 2,038 | 13,330,826 | 13,514,246 | | | 249.7 | | | | | |
| **Total** | | **$29,171,244** | **$29,354,664** | | | | | | | **1.43** | **1.37** |
| Ductless Heat Pump Pilot | | | | | | | | | | | |
| 2009 | 96 | $ 202,004 | $ 451,605 | 409,180 | 0.05 | | 18 | $ 0.031 | $ 0.086 | | |
| 2010 | 104 | 189,231 | 439,559 | 364,000 | 0.04 | | 20 | 0.044 | 0.103 | | |
| **Total** | **200** | **$ 391,235** | **$ 891,164** | **773,180** | | | **20** | **$ 0.043** | **$ 0.098** | **3.42** | **1.36** |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs: Utility[c] | Total Costs: Resource[d] | Savings and Demand Reduction: Annual Energy (kWh) | Savings and Demand Reduction: Average Energy[e] (aMW) | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs[a]: Total Utility ($/kWh) | Levilized Costs[a]: Total Resource ($/kWh) | Program Life Benefit/Cost Ratios[b]: Utility | Program Life Benefit/Cost Ratios[b]: Total Resource |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [redacted] | | | | | | | | | | | |
| Energy Efficient Packets | | | | | | | | | | | |
| 2002 | 2,925 | $ 755 | $ 755 | 155,757 | 0.02 | | 7 | $ 0.001 | $ 0.001 | | |
| **Total** | **2,925** | **$ 755** | **$ 755** | **155,757** | | | **7** | **$ 0.001** | **$ 0.001** | | |
| Energy Efficient Lighting | | | | | | | | | | | |
| 2002 | 11,619 | 243,033 | 310,643 | 3,299,654 | 0.38 | | 7 | 0.012 | 0.015 | | |
| 2003 | 12,663 | 314,641 | 464,059 | 3,596,150 | 0.41 | | 7 | 0.014 | 0.021 | | |
| 2005 | 43,760 | 73,152 | 107,810 | 1,734,646 | 0.20 | | 7 | 0.007 | 0.010 | | |
| 2006 | 178,514 | 298,754 | 539,877 | 6,302,794 | 0.72 | | 7 | 0.008 | 0.014 | | |
| 2007 | 219,739 | 557,646 | 433,626 | 7,207,439 | 0.82 | | 7 | 0.012 | 0.017 | | |
| 2008 | 436,234 | 1,018,292 | 793,265 | 14,309,444 | 1.63 | | 7 | 0.011 | 0.013 | | |
| 2009 | 549,846 | 1,207,366 | 1,456,796 | 13,410,748 | 1.53 | | 5 | 0.020 | 0.024 | | |
| 2010 | 1,190,139 | 2,501,278 | 3,976,476 | 28,082,738 | 3.21 | | 5 | 0.020 | 0.031 | | |
| **Total** | **2,642,513** | **$ 6,214,162** | **$ 8,082,552** | **77,943,613** | | | **5** | **$ 0.018** | **$ 0.023** | **4.54** | **3.49** |
| Energy House Calls | | | | | | | | | | | |
| 2002 | 17 | 26,053 | 26,053 | 25,989 | 0.00 | | 20 | 0.082 | 0.082 | | |
| 2003 | 420 | 167,076 | 167,076 | 602,723 | 0.07 | | 20 | 0.023 | 0.023 | | |
| 2004 | 1,708 | 725,981 | 725,981 | 2,349,783 | 0.27 | | 20 | 0.025 | 0.025 | | |
| 2005 | 891 | 375,610 | 375,610 | 1,775,770 | 0.20 | | 20 | 0.017 | 0.017 | | |
| 2006 | 819 | 336,701 | 336,701 | 777,244 | 0.09 | | 20 | 0.035 | 0.035 | | |
| 2007 | 700 | 336,372 | 336,372 | 699,899 | 0.08 | | 20 | 0.039 | 0.039 | | |
| 2008 | 1,099 | 484,379 | 484,379 | 883,038 | 0.10 | | 20 | 0.045 | 0.045 | | |
| 2009 | 1,266 | 569,594 | 569,594 | 928,875 | 0.11 | | 20 | 0.052 | 0.052 | | |
| 2010 | 1,602 | 762,330 | 762,330 | 1,198,655 | 0.14 | | 20 | 0.054 | 0.054 | | |
| **Total** | **8,522** | **$ 3,784,096** | **$ 3,784,096** | **9,241,976** | | | **20** | **$ 0.035** | **$ 0.035** | **3.06** | **3.06** |
| ENERGY STAR® Homes Northwest | | | | | | | | | | | |
| 2003 | | 13,597 | 13,597 | | | | | | | | |
| 2004 | 44 | 140,165 | 335,437 | 101,200 | 0.01 | 0.1 | 25 | 0.103 | 0.246 | | |
| 2005 | 200 | 253,105 | 315,311 | 415,600 | 0.05 | 0.4 | 25 | 0.045 | 0.056 | | |
| 2006 | 439 | 469,609 | 602,651 | 912,242 | 0.10 | 0.9 | 25 | 0.038 | 0.049 | | |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs | | Savings and Demand Reduction | | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs[a] | | Program Life Benefit/Cost Ratios[b] | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Utility[c] | Resource[d] | Annual Energy (kWh) | Average Energy[e] (aMW) | | | Total Utility ($/kWh) | Total Resource ($/kWh) | Utility | Total Resource |
| ENERGY STAR® Homes Northwest | | | | | | | | | | | |
| 2007 | 303 | $ 475,044 | $ 400,637 | 629,634 | 0.07 | 0.6 | 25 | $ 0.056 | $ 0.047 | | |
| 2008 | 254 | 302,061 | 375,007 | 468,958 | 0.05 | 0.6 | 25 | 0.048 | 0.059 | | |
| 2009 | 474 | 355,623 | 498,622 | 705,784 | 0.08 | 1.1 | 25 | 0.039 | 0.055 | | |
| 2010 | 630 | 375,605 | 579,495 | 883,260 | 0.10 | | 25 | 0.033 | 0.051 | | |
| **Total** | **2,344** | **$ 2,384,809** | **$ 3,120,758** | **4,116,678** | | | **25** | **$ 0.045** | **$ 0.059** | **2.68** | **2.05** |
| Heating & Cooling Efficiency Program | | | | | | | | | | | |
| 2006 | | 17,444 | 17,444 | | | | | | | | |
| 2007 | 4 | 488,211 | 494,989 | 1,595 | 0.00 | | 18 | 27.344 | 27.710 | | |
| 2008 | 359 | 473,551 | 599,771 | 561,441 | 0.06 | | 18 | 0.073 | 0.092 | | |
| 2009 | 349 | 478,373 | 764,671 | 1,274,829 | 0.15 | | 18 | 0.034 | 0.054 | | |
| 2010 | 217 | 327,669 | 1,073,604 | 1,104,497 | 0.10 | | 20 | 0.025 | 0.083 | | |
| **Total** | **929** | **$ 1,785,249** | **$ 2,950,479** | **2,942,362** | | | **20** | **$ 0.056** | **$ 0.092** | **2.44** | **1.47** |
| Home Improvement Program | | | | | | | | | | | |
| 2008 | 282 | 123,454 | 157,866 | 317,814 | 0.04 | | 25 | 0.029 | 0.037 | | |
| 2009 | 1,188 | 321,140 | 550,148 | 1,338,876 | 0.15 | | 25 | 0.019 | 0.032 | | |
| 2010 | 3,537 | 944,716 | 2,112,737 | 3,986,199 | 0.46 | | 45 | 0.016 | 0.035 | | |
| **Total** | **5,007** | **$ 1,389,310** | **$ 2,820,751** | **5,642,889** | | | **45** | **$ 0.016** | **$ 0.033** | **11.57** | **5.70** |
| Home Products Program | | | | | | | | | | | |
| 2007 | | 9,275 | 9,275 | | | | | | | | |
| 2008 | 3,034 | 250,860 | 468,056 | 541,615 | | | 15 | 0.044 | 0.082 | | |
| 2009 | 9,499 | 511,313 | 844,811 | 1,638,038 | | | 15 | 0.031 | 0.051 | | |
| 2010 | 16,322 | 832,161 | 1,025,151 | 1,443,580 | | | 15 | 0.057 | 0.070 | | |
| **Total** | **28,855** | **$ 1,603,609** | **$ 2,347,293** | **3,623,233** | | | **15** | **$ 0.044** | **$ 0.064** | **2.44** | **1.66** |
| Oregon Residential Weatherization | | | | | | | | | | | |
| 2002 | 24 | -662 | 23,971 | 4,580 | 0.00 | | 25 | 0.010 | 0.389 | | |
| 2003 | | -943 | | | | | | | | | |
| 2004 | 4 | 1,057 | 1,057 | | | | | | | | |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs: Utility[c] | Total Costs: Resource[d] | Savings and Demand Reduction: Annual Energy (kWh) | Savings and Demand Reduction: Average Energy[e] (aMW) | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs[a]: Total Utility ($/kWh) | Levilized Costs[a]: Total Resource ($/kWh) | Program Life Benefit/Cost Ratios[b]: Utility | Program Life Benefit/Cost Ratios[b]: Total Resource |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [redacted] | | | | | | | | | | | |
| Oregon Residential Weatherization | | | | | | | | | | | |
| 2005 | 4 | $ 612 | $ 3,608 | 7,927 | 0.00 | | 25 | $ 0.006 | $ 0.034 | | |
| 2006 | | 4,126 | 4,126 | | | | | | | | 3 |
| 2007 | 1 | 3,781 | 5,589 | 9,971 | 0.00 | | 25 | 0.028 | 0.042 | | |
| 2008 | 3 | 7,417 | 28,752 | 22,196 | 0.00 | | 25 | 0.025 | 0.096 | | |
| 2009 | 1 | 7,644 | 8,410 | 2,907 | 0.00 | | 25 | 0.203 | 0.223 | | |
| 2010 | 1 | 6,050 | 6,275 | 320 | 0.00 | | 30 | 0.011 | 0.062 | | |
| **Total** | **38** | **$ 29,083** | **$ 81,789** | **47,901** | | | **30** | **$ 0.044** | **$ 0.124** | **2.88** | **1.02** 4 |
| Rebate Advantage | | | | | | | | | | | |
| 2003 | 73 | 27,372 | 79,399 | 227,434 | 0.03 | | 45 | 0.008 | 0.022 | | |
| 2004 | 105 | 52,187 | 178,712 | 332,587 | 0.04 | | 45 | 0.010 | 0.034 | | |
| 2005 | 98 | 46,173 | 158,462 | 312,311 | 0.04 | | 45 | 0.009 | 0.032 | | |
| 2006 | 102 | 52,673 | 140,289 | 333,494 | 0.04 | | 45 | 0.010 | 0.027 | | |
| 2007 | 123 | 89,269 | 182,152 | 554,018 | 0.06 | | 45 | 0.010 | 0.021 | | |
| 2008 | 107 | 90,888 | 179,868 | 463,401 | 0.05 | | 45 | 0.012 | 0.025 | | |
| 2009 | 57 | 49,525 | 93,073 | 247,348 | 0.03 | | 25 | 0.015 | 0.029 | | |
| 2010 | 35 | 39,402 | 66,142 | 164,894 | 0.02 | | 25 | 0.018 | 0.031 | | |
| **Total** | **700** | **$ 447,490** | **$ 1,078,097** | **2,635,487** | | | **25** | **$ 0.013** | **$ 0.032** | **8.61** | **3.57** |
| See ya later, refrigerator® | | | | | | | | | | | |
| 2009 | 1,661 | 305,402 | 305,401 | 1,132,802 | 0.13 | | 8 | 0.041 | 0.041 | | |
| 2010 | 3,152 | 565,079 | 565,079 | 1,567,736 | 0.18 | | 8 | 0.054 | 0.054 | | |
| **Total** | **4,813** | **$ 870,481** | **$ 870,480** | **2,700,538** | | | **8** | **$ 0.049** | **$ 0.049** | **1.88** | **1.88** |
| Weatherization Solutions for Eligible Customers | | | | | | | | | | | |
| 2008 | 16 | 52,807 | 52,807 | 71,680 | 0.01 | | 25 | 0.057 | 0.057 | | |
| 2009 | 41 | 162,995 | 162,995 | 211,720 | 0.02 | | 25 | 0.059 | 0.059 | | |
| 2010 | 47 | 228,425 | 228,425 | 313,309 | 0.04 | | 25 | 0.056 | 0.056 | | |
| **Total** | **104** | **$ 444,227** | **$ 444,227** | **596,708** | | | **25** | **$ 0.058** | **$ 0.058** | **1.98** | **1.98** |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs: Utility[c] | Total Costs: Resource[d] | Savings and Demand Reduction: Annual Energy (kWh) | Savings and Demand Reduction: Average Energy[e] (aMW) | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs[a]: Total Utility ($/kWh) | Levilized Costs[a]: Total Resource ($/kWh) | Program Life Benefit/Cost Ratios[b]: Utility | Program Life Benefit/Cost Ratios[b]: Total Resource |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Window A/C Trade Up Pilot | | | | | | | | | | | |
| 2003 | 99 | $ 6,687 | $ 10,492 | 14,454 | 0.00 | | 12 | $ 0.051 | $ 0.079 | | |
| **Total** | **99** | **$ 6,687** | **$ 10,492** | **14,454** | | | **12** | **$ 0.005** | **$ 0.082** | | |
| WAQC—Idaho | | | | | | | | | | | |
| 2002 | 197 | 235,048 | 492,139 | | | | | | | | |
| 2003 | 208 | 228,134 | 483,369 | | | | | | | | |
| 2004 | 269 | 498,474 | 859,482 | 1,271,677 | 0.15 | | 25 | 0.029 | 0.050 | | |
| 2005 | 570 | 1,402,487 | 1,927,424 | 3,179,311 | 0.36 | | 25 | 0.033 | 0.045 | | |
| 2006 | 540 | 1,455,373 | 2,231,086 | 2,958,024 | 0.34 | | 25 | 0.037 | 0.056 | | |
| 2007 | 397 | 1,292,930 | 1,757,105 | 3,296,019 | 0.38 | | 25 | 0.029 | 0.040 | | |
| 2008 | 439 | 1,375,632 | 1,755,749 | 4,064,301 | 0.46 | | 25 | 0.025 | 0.032 | | |
| 2009 | 427 | 1,260,922 | 1,937,578 | 4,563,832 | 0.52 | | 25 | 0.021 | 0.033 | | |
| 2010 | 373 | 1,207,705 | 2,814,471 | 3,452,025 | 0.39 | | 25 | 0.027 | 0.035 | | |
| **Total** | **3,420** | **$ 8,956,705** | **$14,258,403** | **22,785,189** | | | **25** | **$ 0.030** | **$ 0.048** | **4.39** | **2.76** |
| WAQC—Oregon | | | | | | | | | | | |
| 2002 | 31 | 24,773 | 47,221 | 68,323 | 0.01 | | 25 | 0.027 | 0.051 | | |
| 2003 | 29 | 22,255 | 42,335 | 102,643 | 0.01 | | 25 | 0.016 | 0.031 | | |
| 2004 | 17 | 13,469 | 25,452 | 28,436 | 0.00 | | 25 | 0.035 | 0.067 | | |
| 2005 | 28 | 44,348 | 59,443 | 94,279 | 0.01 | | 25 | 0.035 | 0.047 | | |
| 2006 | | | | | | | | | | | |
| 2007 | 11 | 30,694 | 41,700 | 42,108 | 0.00 | | 25 | 0.054 | 0.074 | | |
| 2008 | 14 | 43,843 | 74,048 | 73,841 | 0.01 | | 25 | 0.040 | 0.068 | | |
| 2009 | 10 | 33,940 | 46,513 | 114,982 | 0.01 | | 25 | 0.023 | 0.031 | | |
| 2010 | 27 | 113,427 | 147,745 | 289,627 | 0.03 | | 25 | 0.030 | 0.032 | | |
| **Total** | **167** | **$326,748** | **$ 484,457** | **814,239** | | | **25** | **$ 0.031** | **$ 0.046** | **4.12** | **2.78** |
| WAQC—BPA Supplemental | | | | | | | | | | | |
| 2002 | 75 | 55,966 | 118,255 | 311,347 | 0.04 | | 25 | 0.013 | 0.028 | | |
| 2003 | 57 | 49,895 | 106,915 | 223,591 | 0.03 | | 25 | 0.017 | 0.036 | | |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs: Utility[c] | Total Costs: Resource[d] | Savings and Demand Reduction: Annual Energy (kWh) | Savings and Demand Reduction: Average Energy[e] (aMW) | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs[a]: Total Utility ($/kWh) | Levilized Costs[a]: Total Resource ($/kWh) | Program Life Benefit/Cost Ratios[b]: Utility | Program Life Benefit/Cost Ratios[b]: Total Resource |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [redacted] | | | | | | | | | | | |
| WAQC—BPA Supplemental | | | | | | | | | | | |
| 2004 | 40 | $ 69,409 | $ 105,021 | 125,919 | 0.01 | | 25 | $ 0.041 | $ 0.062 | | |
| **Total** | **172** | **$ 175,270** | **$ 330,191** | **660,857** | | | **25** | **$ 0.020** | **$ 0.038** | | |
| [redacted] | | | | | | | | | | | |
| Air Care Plus Pilot | | | | | | | | | | | |
| 2003 | 4 | $ 5,764 | $ 9,061 | 33,976 | 0.00 | | 10 | $ 0.021 | $ 0.033 | | |
| 2004 | | 344 | $344 | | | | | | | | |
| **Total** | **4** | **$ 6,108** | **$ 9,405** | **33,976** | | | **10** | **$ 0.023** | **$ 0.035** | | |
| Building Efficiency | | | | | | | | | | | |
| 2004 | | 28,821 | 28,821 | | | | | | | | |
| 2005 | 12 | 194,066 | 233,149 | 494,239 | 0.06 | 0.2 | 12 | 0.043 | 0.052 | | |
| 2006 | 40 | 374,008 | 463,770 | 704,541 | 0.08 | 0.3 | 12 | 0.058 | 0.072 | | |
| 2007 | 22 | 669,032 | 802,839 | 2,817,248 | 0.32 | 0.5 | 12 | 0.015 | 0.032 | | |
| 2008 | 60 | 1,055,009 | 1,671,375 | 6,598,123 | 0.75 | 1.0 | 12 | 0.017 | 0.028 | | |
| 2009 | 72 | 1,327,128 | 2,356,434 | 6,146,139 | 0.70 | 1.3 | 12 | 0.024 | 0.043 | | |
| 2010 | 70 | 1,509,682 | 3,312,963 | 10,819,598 | 1.24 | 0.9 | 12 | 0.016 | 0.035 | | |
| **Total** | **276** | **$ 5,157,747** | **$ 8,869,352** | **27,579,888** | | | **12** | **$ 0.021** | **$ 0.036** | **4.60** | **2.67** |
| Easy Upgrades | | | | | | | | | | | |
| 2006 | | 31,819 | 31,819 | | | | | | | | |
| 2007 | 104 | 711,494 | 1,882,035 | 5,183,640 | 0.59 | 0.8 | 12 | 0.015 | 0.040 | | |
| 2008 | 666 | 2,992,261 | 10,096,627 | 25,928,391 | 2.96 | 4.5 | 12 | 0.013 | 0.043 | | |
| 2009 | 1,224 | 3,325,505 | 10,076,237 | 35,171,627 | 4.02 | 6.1 | 12 | 0.011 | 0.032 | | |
| 2010 | 1,535 | 3,974,410 | 7,655,397 | 35,824,463 | 4.09 | 7.8 | 12 | 0.013 | 0.024 | | |
| **Total** | **3,529** | **$11,035,489** | **$29,742,115** | **102,108,121** | | | **12** | **$ 0.012** | **$ 0.033** | **7.93** | **2.94** |
| Holiday Lighting | | | | | | | | | | | |
| 2008 | 14 | 28,782 | 73,108 | 259,092 | 0.03 | | 10 | 0.014 | 0.035 | | |
| 2009 | 32 | 33,930 | 72,874 | 142,109 | 0.02 | | 10 | 0.031 | 0.066 | | |
| 2010 | 25 | 46,132 | 65,308 | 248,865 | 0.03 | | 10 | 0.024 | 0.034 | | |
| **Total** | **71** | **$ 108,844** | **$ 211,291** | **650,066** | | | **10** | **$ 0.021** | **$ 0.042** | **3.76** | **1.94** |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs: Utility[c] | Total Costs: Resource[d] | Savings and Demand Reduction: Annual Energy (kWh) | Savings and Demand Reduction: Average Energy[e] (aMW) | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs[a]: Total Utility ($/kWh) | Levilized Costs[a]: Total Resource ($/kWh) | Program Life Benefit/Cost Ratios[b]: Utility | Program Life Benefit/Cost Ratios[b]: Total Resource |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Oregon Commercial Audits | | | | | | | | | | | |
| 2002 | 24 | $ 5,200 | $ 5,200 | | | | | | | | |
| 2003 | 21 | 0 | 4,000 | | | | | | | | |
| 2004 | 7 | 0 | 0 | | | | | | | | |
| 2005 | 7 | 5,450 | 5,450 | | | | | | | | |
| 2006 | 6 | | | | | | | | | | |
| 2007 | | 1,981 | 1,981 | | | | | | | | |
| 2008 | | 58 | 58 | | | | | | | | |
| 2009 | 41 | 20,732 | 20,732 | | | | | | | | |
| 2010 | 22 | 5,049 | 5,049 | | | | | | | | |
| **Total** | **128** | **$ 38,470** | **$ 42,470** | | | | | | | | |
| Oregon School Efficiency | | | | | | | | | | | |
| 2005 | | 86 | 86 | | | | | | | | |
| 2006 | 6 | 24,379 | 89,771 | 223,368 | 0.03 | | 12 | $ 0.012 | $ 0.044 | | |
| **Total** | **6** | **$ 24,465** | **$ 89,858** | **223,368** | | | **12** | **$ 0.012** | **$ 0.046** | | |
| Custom Efficiency | | | | | | | | | | | |
| 2003 | | $ 1,303 | $ 1,303 | | | | | | | | |
| 2004 | 1 | 112,311 | 133,441 | 211,295 | 0.02 | | 12 | $ 0.058 | $ 0.069 | | |
| 2005 | 24 | 1,128,076 | 3,653,152 | 12,016,678 | 1.37 | | 12 | 0.010 | 0.033 | | |
| 2006 | 40 | 1,625,216 | 4,273,885 | 19,211,605 | 2.19 | | 12 | 0.009 | 0.024 | | |
| 2007 | 49 | 3,161,866 | 7,012,686 | 29,789,304 | 3.40 | 3.6 | 12 | 0.012 | 0.026 | | |
| 2008 | 101 | 4,045,671 | 16,312,379 | 41,058,639 | 4.69 | 4.8 | 12 | 0.011 | 0.044 | | |
| 2009 | 132 | 6,061,467 | 10,848,123 | 51,835,612 | 5.92 | 6.7 | 12 | 0.013 | 0.024 | | |
| 2010 | 223 | 8,778,125 | 17,172,176 | 71,580,075 | 8.17 | 9.5 | 12 | 0.014 | 0.027 | | |
| **Total** | **570** | **$24,914,034** | **$59,407,144** | **225,703,208** | | | **12** | **$ 0.013** | **$ 0.030** | **7.85** | **3.29** |
| Irrigation Efficiency | | | | | | | | | | | |
| 2003 | 2 | $ 41,089 | $ 54,609 | 36,792 | 0.00 | 0.0 | 15 | $ 0.106 | $ 0.141 | | |
| 2004 | 33 | 120,808 | 402,978 | 802,812 | 0.09 | 0.4 | 15 | 0.014 | 0.048 | | |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs: Utility[c] | Total Costs: Resource[d] | Savings and Demand Reduction: Annual Energy (kWh) | Savings and Demand Reduction: Average Energy[e] (aMW) | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs[a]: Total Utility ($/kWh) | Levilized Costs[a]: Total Resource ($/kWh) | Program Life Benefit/Cost Ratios[b]: Utility | Program Life Benefit/Cost Ratios[b]: Total Resource |
|---|---|---|---|---|---|---|---|---|---|---|---|
| [redacted] | | | | | | | | | | | |
| Irrigation Efficiency | | | | | | | | | | | |
| 2005 | 38 | $ 150,577 | $ 657,460 | 1,012,883 | 0.12 | 0.4 | 15 | $ 0.014 | $ 0.062 | | |
| 2006 | 559 | 2,779,620 | 8,514,231 | 16,986,008 | 1.94 | 5.1 | 8 | 0.024 | 0.073 | | |
| 2007 | 816 | 2,001,961 | 8,694,772 | 12,304,073 | 1.40 | 3.4 | 8 | 0.024 | 0.103 | | |
| 2008 | 961 | 2,103,702 | 5,850,778 | 11,746,395 | 1.34 | 3.5 | 8 | 0.026 | 0.073 | | |
| 2009 | 887 | 2,293,896 | 6,732,268 | 13,157,619 | 1.50 | 3.4 | 8 | 0.026 | 0.077 | | |
| 2010 | 753 | 2,200,814 | 6,968,598 | 10,968,430 | 1.25 | 3.3 | 8 | 0.030 | 0.096 | | |
| **Total** | **4,049** | **$11,692,468** | **$37,875,693** | **67,015,012** | | | **8** | **$ 0.026** | **$ 0.085** | **5.93** | **1.83** [7] |
| [redacted] | | | | | | | | | | | |
| Building Operator Training | | | | | | | | | | | |
| 2003 | 71 | $ 48,853 | $ 48,853 | 1,825,000 | 0.21 | | 5 | $ 0.006 | $ 0.006 | | |
| 2004 | 26 | 43,969 | 43,969 | 650,000 | 0.07 | | 5 | 0.014 | 0.014 | | |
| 2005 | 7 | 1,750 | 4,480 | 434,167 | 0.05 | | 5 | 0.001 | 0.002 | | |
| **Total** | **104** | **$ 94,572** | **$ 97,302** | **2,909,167** | | | **5** | **$ 0.007** | **$ 0.007** | | |
| Commercial Education Initiative | | | | | | | | | | | |
| 2005 | | 3,497 | 3,497 | | | | | | | | |
| 2006 | | 4,663 | 4,663 | | | | | | | | |
| 2007 | | 26,823 | 26,823 | | | | | | | | |
| 2008 | | 72,738 | 72,738 | | | | | | | | |
| 2009 | | 120,584 | 120,584 | | | | | | | | |
| 2010 | | 68,765 | 68,765 | | | | | | | | |
| **Total** | | **$ 297,070** | **$ 297,070** | | | | | | | | |
| Distribution Efficiency | | | | | | | | | | | |
| 2005 | | 21,552 | 43,969 | | | | | | | | |
| 2006 | | 24,306 | 24,306 | | | | | | | | |
| 2007 | | 8,987 | 8,987 | | | | | | | | |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs | | Savings and Demand Reduction | | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs[a] | | Program Life Benefit/Cost Ratios[b] | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Utility[c] | Resource[d] | Annual Energy *(kWh)* | Average Energy[e] *(aMW)* | | | Total Utility ($/kWh) | Total Resource ($/kWh) | Utility | Total Resource |
| Distribution Efficiency | | | | | | | | | | | |
| 2008 | | $ -1,913 | $ -1,913 | | | | | | | | |
| **Total** | | **$ 52,932** | **$ 75,349** | | | | | | | | |
| DSM Direct Program Overhead | | | | | | | | | | | |
| 2007 | | 56,909 | 56,909 | | | | | | | | |
| 2008 | | 169,911 | 169,911 | | | | | | | | |
| 2009 | | 164,957 | 164,957 | | | | | | | | |
| 2010 | | 117,874 | 117,874 | | | | | | | | |
| **Total** | | **$ 509,651** | **$ 509,651** | | | | | | | | |
| Other C&RD and CRC BPA | | | | | | | | | | | |
| 2002 | | 55,722 | 55,722 | | | | | | | | |
| 2003 | | 67,012 | 67,012 | | | | | | | | |
| 2004 | | 108,191 | 108,191 | | | | | | | | |
| 2005 | | 101,177 | 101,177 | | | | | | | | |
| 2006 | | 124,956 | 124,956 | | | | | | | | |
| 2007 | | 31,645 | 31,645 | | | | | | | | |
| 2008 | | 6,950 | 6,950 | | | | | | | | |
| **Total** | | **$ 495,654** | **$ 495,654** | | | | | | | | |
| Residential Energy Efficiency Education Initiative | | | | | | | | | | | |
| 2005 | | 7,498 | 7,498 | | | | | | | | |
| 2006 | | 56,727 | 56,727 | | | | | | | | |
| 2007 | | | | | | | | | | | |
| 2008 | | 150,917 | 150,917 | | | | | | | | |
| 2009 | | 193,653 | 193,653 | | | | | | | | |
| 2010 | | 222,092 | 222,092 | | | | | | | | |
| **Total** | | **$ 630,887** | **$ 630,887** | | | | | | | | |
| Solar 4R Schools | | | | | | | | | | | |
| 2009 | | 42,522 | 45,522 | | | | | | | | |
| **Total** | | **$ 42,522** | **$ 45,522** | | | | | | | | |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs: Utility[c] | Total Costs: Resource[d] | Savings and Demand Reduction: Annual Energy (kWh) | Savings and Demand Reduction: Average Energy[e] (aMW) | Peak Demand[f] (MW) | Measure Life (Years) | Levilized Costs[a]: Total Utility ($/kWh) | Levilized Costs[a]: Total Resource ($/kWh) | Program Life Benefit/Cost Ratios[b]: Utility | Program Life Benefit/Cost Ratios[b]: Total Resource |
|---|---|---|---|---|---|---|---|---|---|---|---|
| **Other Programs** | | | | | | | | | | | |
| Local Energy Efficiency Funds | | | | | | | | | | | |
| 2003 | 56 | $ 5,100 | $ 5,100 | | | | | | | | |
| 2004 | | 23,449 | 23,449 | | | | | | | | |
| 2005 | 2 | 14,896 | 26,756 | 78,000 | 0.01 | | 10 | $0.024 | $0.042 | | |
| 2006 | 480 | 3,459 | 3,459 | 19,027 | 0.00 | | 7 | $0.009 | $0.009 | | |
| 2007 | 1 | 7,520 | 7,520 | 9,000 | 0.00 | | 7 | $0.135 | $0.135 | | |
| 2008 | 2 | 22,714 | 60,100 | 115,931 | 0.01 | | 15 | $0.019 | $0.049 | | |
| 2009 | 1 | 5,870 | 4,274 | 10,340 | 0.00 | | 12 | $0.064 | $0.047 | | |
| 2010 | 1 | 251 | 251 | | 0.00 | | | n/a | n/a | | |
| **Total** | **543** | **$ 83,259** | **$ 130,909** | **232,298** | | | **10** | **$0.046** | **$0.072** | **n/a** | **n/a** |
| **Market Transformation** | | | | | | | | | | | |
| NEEA | | | | | | | | | | | |
| 2002 | | $1,286,632 | $ 1,286,632 | 12,925,450 | 1.48 | | | | | | |
| 2003 | | 1,292,748 | 1,292,748 | 11,991,580 | 1.37 | | | | | | |
| 2004 | | 1,256,611 | 1,256,611 | 13,329,071 | 1.52 | | | | | | |
| 2005 | | 476,891 | 476,891 | 16,422,224 | 1.87 | | | | | | |
| 2006 | | 930,455 | 930,455 | 18,597,955 | 2.12 | | | | | | |
| 2007 | | 893,340 | 893,340 | 28,601,410 | 3.27 | | | | | | |
| 2008 | | 942,014 | 942,014 | 21,024,729 | 2.40 | | | | | | [8] |
| 2009 | | 968,263 | 968,263 | 10,702,998 | 1.22 | | | | | | [8] |
| 2010 | | 2,391,217 | 2,391,217 | 15,334,073 | 1.75 | | | | | | [9] |
| **Total** | | **$10,438,170** | **$ 10,438,170** | **148,929,041** | | | | | | | |
| Consumer Electronic Initiative | | | | | | | | | | | |
| 2009 | | 160,762 | 160,762 | | | | | | | | |
| **Total** | | **$ 160,762** | **$ 160,762** | | | | | | | | |
| **Annual Totals** | | | | | | | | | | | |
| 2002 | | **$ 1,932,520** | **$ 2,366,591** | **16,791,100** | **1.92** | **0.0** | | | | | |
| 2003 | | **2,566,229** | **3,125,573** | **18,654,343** | **2.13** | **0.0** | | | | | |
| 2004 | | **3,827,212** | **4,860,912** | **19,202,780** | **2.19** | **6.6** | | | | | |
| 2005 | | **6,523,349** | **10,383,578** | **37,978,035** | **4.34** | **44.3** | | | | | |

## **Appendix 4**. DSM expense and performance 2002–2010 (continued)

| Program/Year | Participants | Total Costs | | Savings and Demand Reduction | | | | Levilized Costs[a] | | Program Life Benefit/Cost Ratios[b] | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Utility[c] | Resource[d] | Annual Energy *(kWh)* | Average Energy[e] *(aMW)* | Peak Demand[f] (MW) | Measure Life (Years) | Total Utility ($/kWh) | Total Resource ($/kWh) | Utility | Total Resource |
| 2006 | | $ 11,174,181 | $ 20,950,111 | 67,026,303 | 7.65 | 44.4 | | | | | |
| 2007 | | 14,896,816 | 27,123,018 | 91,145,357 | 10.40 | 58.5 | | | | | |
| 2008 | | 20,213,215 | 44,775,827 | 128,508,579 | 14.61 | 74.9 | | | | | |
| 2009 | | 33,821,062 | 53,090,852 | 143,146,364 | 16.15 | 236.6 | | | | | |
| 2010 | | 44,643,541 | 69,196,651 | 187,626,344 | 21.23 | 357.7 | | | | | |
| **Total Direct Program** | | $139,598,124 | $ 236,873,113 | 710,079,205 | | | | | | | |
| DSM Overhead and Other Indirect | | | | | | | | | | | |
| 2002 | | $ 128,855 | | | | | | | | | |
| 2003 | | -41,543 | | | | | | | | | |
| 2004 | | 142,334 | | | | | | | | | |
| 2005 | | 177,624 | | | | | | | | | |
| 2006 | | 309,832 | | | | | | | | | |
| 2007 | | 765,561 | | | | | | | | | |
| 2008 | | 980,305 | | | | | | | | | |
| 2009 | | 1,025,704 | | | | | | | | | |
| 2010 | | 1,189,175 | | | | | | | | | |
| **Total** | | $ 4,677,850 | | | | | | | | | |
| 2002 | | $ 2,061,375 | | | | | | | | | |
| 2003 | | 2,524,686 | | | | | | | | | |
| 2004 | | 3,969,549 | | | | | | | | | |
| 2005 | | 6,700,973 | | | | | | | | | |
| 2006 | | 11,484,013 | | | | | | | | | |
| 2007 | | 15,662,377 | | | | | | | | | |
| 2008 | | 21,193,520 | | | | | | | | | |
| 2009 | | 34,846,766 | | | | | | | | | |
| 2010 | | 45,832,851 | | | | | | | | | |
| **Total 2002–2010** | | $144,276,109 | | | | | | | | | |

End notes:

[a] Levelized Costs are based on financial inputs from IPC's 2009 IRP, and calculations include line loss adjusted energy savings.

[b] Program life B/C ratios are provided for active programs only.

[c] The Total Utility Cost is all cost incurred by IPC to implement and manage a DSM program.

[d] The Total Resource Cost is the total expenditures for a DSM program from the point of view of IPC and its customers as a whole.

[e] Average Demand = Annual Energy/8,760 annual hours.

[f] Peak Demand is reported for programs that directly reduce load or measure demand reductions during summer peak season. Peak demand reduction for demand response programs is reported at the generation level assuming 13% peak line losses and is non-coincident.

[1] Peak MW achieved based on mid-week load reduction schedule.

[2] Utility cost reflects collected funds on previous bad loan write-offs.

[3] Utility cost reflects only audit and administration costs; there was no further activity in 2006.

[4] Levelized cost calculation includes bad loan write-off expense and funds collected from previously written off loans.

[5] Beginning in 2005, BPA funds were no longer applied to CAP agency payments.

[6] Oregon statutory program. The company does not monitor customer implementation of audit recommendations and thus does not estimate savings for this program. Audit expense not involving outside contractor services are booked to general customer service.

[7] Measure life is weighted life (based on energy savings) of custom option (15 years) and menu options (5 years).

[8] Savings were adjusted by NEEA in 2010.

[9] Savings are preliminary estimates provided by NEEA.