



# IDAHO POWER

## ENERGY WISE® PROGRAM SUMMARY REPORT

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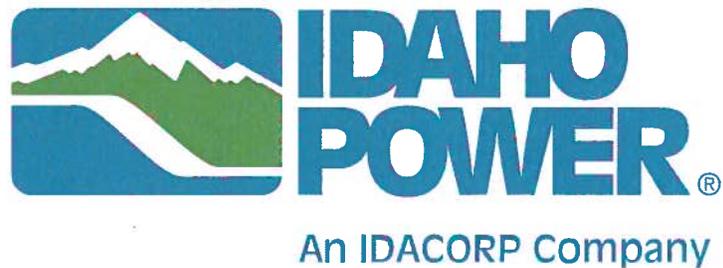
SUBMITTED BY:  
RESOURCE ACTION PROGRAMS®



2009 - 2010

# Idaho Power Energy Wise Program

Sponsored by:



## Program Summary Report 2009 - 2010

Submitted By:

**Resource Action Programs'**



**May 2010**

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# EXECUTIVE SUMMARY

This report summarizes the 2009 - 2010 Idaho Power Energy Wise Program which was implemented by teachers in Idaho Power's service area. The program was used by one thousand forty-five (1,045) sixth-grade students, teachers and their families, and was funded by Idaho Power.

The Program is a fully implemented, multi-resource efficiency/education program designed to facilitate installation of efficiency measures in homes and build knowledge of environmental issues. The Program yields a variety of measurable energy savings results using the best messengers - students. The Program delivered a proven blend of teacher-designed classroom activities with hands-on home projects to install energy efficiency devices and introduce resource-conscious behavior to students and their families. Both educational studies and utility evaluations have confirmed the importance of addressing the various learning styles to maximize both learning and the adoption of new behaviors. The most critical elements of this approach are both the actual use of the new knowledge as well as the reporting function which provides



*The Program delivered a proven blend of teacher-designed classroom activities with hands-on home projects to install high efficiency devices.*

*"Thanks for providing such good information."*  
Diana Scott, Parent  
Filer Elementary School

a crucial reinforcement of the learning process while increasing participation and persistence. An overview of the results from the Program appears below, with greater detail in the attached report.

**Participant Satisfaction:** A significant element of a successful Program is participant satisfaction. Students, teachers and parents are all asked to evaluate the program and provide personal comments. Responses were unanimously positive and reveal a high level of parent involvement in the activities. Specifically:

- **100% of participating teachers indicated that parents supported the program.**
  - **100% of participating teachers indicated they would recommend this program to other colleagues.**
  - **81% of participating students gave the program a rating of good or great.**
- (A summary of responses can be found in Appendix C)



**Knowledge Gained:** Identical surveys (tests) were taken by students prior to the Program and again upon Program completion to measure knowledge gained. Scores and subject knowledge improved from **77% to 86%**.

**Audit Data Obtained:** Home audits were performed by students and their families, collecting household demographic and usage data along with program participation information.

- **73% reported that their family homes were owned.**
  - **62% reported that their water was heated by electricity.**
  - **79% reported that their home has a dishwasher.**
- (A summary of responses can be found in Appendix B)

**Measures Installed:** Students completed retrofit activities as part of the Program, and reported the measures they installed in their own homes. Specifically:

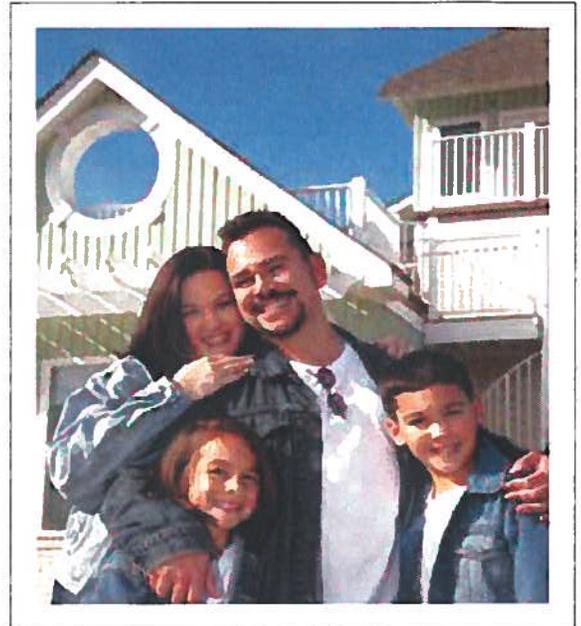
- **78% reported they installed the 13 Watt Compact Fluorescent Lamp (CFL).**
  - **88% reported they installed the LimeLite® Night Light.**
- (A summary of responses can be found in Appendix B)

**Energy Savings Results:** In addition to educating students and their parents, the primary program goal for utility sponsors is to generate cost effective energy savings. Student reporting activities not only provided the data used in savings projections, but also reinforced the learning benefits.

<b>Projected Resource Savings</b>			
<small>(A list of assumptions and formulas used for these calculations can be found in Appendix A)</small>			
<b>Projected Annual Savings</b>		<b>Projected Ten Year Savings</b>	
<b>251,989</b>	<b>kWh electricity saved</b>	<b>1,921,078</b>	<b>kWh electricity saved</b>
<b>4,524</b>	<b>therms of gas saved</b>	<b>45,238</b>	<b>therms of gas saved</b>
<b>Projected Average Annual Savings per Home</b>		<b>Projected Average Ten Year Savings per Home</b>	
<b>241</b>	<b>kWh electricity saved</b>	<b>1,838</b>	<b>kWh electricity saved</b>
<b>4</b>	<b>therms of gas saved</b>	<b>43</b>	<b>therms of gas saved</b>

For more than sixteen years, Resource Action Programs (RAP) has designed and implemented resource efficiency and education programs – changing household energy and water use while delivering significant, measurable resource savings for program sponsors. All RAP programs feature a proven blend of innovative education, comprehensive implementation services, and hands-on activities to put new knowledge to work in students' homes.

RAP Programs serve more than 200,000 households each year through elementary school, middle school and adult programs. Our forty person staff manages the implementation process and program oversight for nearly 200 individual programs annually. Recognized nationally as a leader in water and energy efficiency education and program design, RAP has a strong reputation for providing a high level of client service to its sponsors as part of a wide range of conservation and resource efficiency solutions for municipalities, utilities, states, community agencies and corporations.



***RAP Programs serve more than 200,000 households each year through elementary school, middle school, and adult programs.***

All aspects of program design and implementation is completed from the Program Center in Sparks, Nevada. These include graphic and web design, print production, warehousing and distribution, kit production, marketing, program tracking, data tabulation, and reporting.

The school-based Energy Wise Program is fully implemented and designed to generate immediate and long-term savings by bringing interactive “real world” education home with motivated students. The Program staff identifies and enrolls students and teachers within the designated service territory. Enrolled participants receive educational materials designed to build knowledge and demonstrate simple ways to save, by not only changing habits, but also changing devices. Materials support state and national educational standards, which allow the Program to easily fit into teachers’ existing schedules and requirements.

The Program begins with classroom discussions teaching the importance of using water and energy efficiently, followed by hands-on, creative problem solving. Next, participants take home a Energy Wise Activity Kit that contains high efficiency measures. With the help of their parents, they install the measures in their home and complete a home survey. The Energy Wise staff tabulates all responses, including home survey information, teacher responses, student input, parent responses, and generates a Program Summary Report. After installing and monitoring the new efficiency measures in their homes, students are able to measure what they have learned by seeing the actual water and energy monetary savings! These savings benefit both the participating student households and their communities overall.

Each participant receives classroom materials and a Energy Wise Activity Kit containing efficiency measures for their homes to perform the hands-on activities. Modifications were made to select materials which incorporated Idaho Power's logo and color scheme.

### Each student/teacher receives:

Student Guide

Student Workbook

Parent Introduction Letter\*

Home Audit Form

Pre & Post Surveys

Certificate of Achievement

Energy Wise Activity Kit containing:

- 13 Watt Compact Fluorescent Lamp (CFL)
- 18 Watt Compact Fluorescent Lamp (CFL)
- 23 Watt Compact Fluorescent Lamp (CFL)
- FilterTone® Alarm\*
- LimeLite® Night Light
- Natural Resources Fact Chart
- Air Temperature Ruler
- Reminder Stickers and Magnet Pack\*
- Parent Comment Card

'GetWise' Wristbands

Interactive Program Web site

Toll-Free Telephone Support

### Each teacher/classroom receives:

Teacher Book

Step-by-Step Program Checklist

Lesson Plans

Teacher Program Evaluation

Supplemental Activities\*

ID State Education Standards Correlation Chart

Pre/Post Survey Answer Keys

Classroom Electricity Poster

Self Addressed Postage Paid Envelope



\*Materials / Installation Instructions

Provided in English and Spanish



## PROGRAM IMPLEMENTATION

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The 2009-2010 Energy Wise Program followed this comprehensive implementation schedule:

1. Identification of ID State Education Standards & Benchmarks
2. Curriculum Development and Refinement (Completed Annually)
3. Curriculum Correlation to ID State Education Standards & Benchmarks
4. Materials Modification to Incorporate Idaho Power's Logo and Color Scheme
5. Incentive Program Development
6. Teachers Enrolled in the Program Individually by Idaho Power
7. Implementation Dates Scheduled with Teachers
8. Program Material Delivered to Coincide with Desired Implementation Date
9. Delivery Confirmation
10. Periodic Contact to Ensure Implementation and Teacher Satisfaction
11. Program Completion Incentive Offered
12. Results Collection
13. Program Completion Incentive Delivered to Qualifying Participants
14. Thank-you Cards Sent to Participating Teachers
15. Data Analysis
16. Program Summary Report

Participating teachers are free to implement the Program to coincide with their lesson plans and class schedules. The next table is a comprehensive list of sixth-grade classrooms that participated during the 2009-2010 school year.

School	Teacher	Teachers	Students
7th Day Adventist School	April Copley	1	14
American Falls Intermediate School	Kristen Jensen	1	20
Canyonside Christian School	Dan Kuka	1	30
Castleford Elementary School	Kent Dahl	1	20
Council Elementary School	Janice Paradis	1	18
Eagle Hills Elementary School	Amy Cox	1	30
Eliza Hart Spalding Elementary School	Shawna Brenna	1	35
Endeavor School	Sonia Galaviz	1	30
Filer Elementary School	Larry Sutton	1	22
Fruitland Middle School	Heidi Olson	1	26
Galileo Math & Science Magnet	Nicole Sarty	1	35
Greenacres Elementary School	Tamme Mullett	1	20
Greenacres Elementary School	Tacia Tsakrios	1	20
Hagerman Elementary School	Ruby Marshall	1	16
Hansen Elementary School	Shirley Mikota	1	25
Harrison Elementary School	Connie Petersen	1	30
Highlands Elementary School	Ingrid Jungen	1	30
Homedale Middle School	Jennifer Martin	1	30
Horizon Elementary School	Tracy Blenker	1	30
I.B. Perrine Elementary School	Gaelene Mueller	1	27
Indian Hills Elementary	Mark Bowman	1	30
Indian Hills Elementary	Carolyn Dudley	1	30
Indian Hills Elementary	Toni Wright	1	30
Kimberly Elementary	Sheryll Sharp	1	25
Kimberly Elementary	Kelly Gibbons	1	25
Koelsch Elementary School	Tom Clark	1	3
Lincoln Elementary School	Rhonda Slagel-Sao	1	30
Magic Valley Christian School	Debra Carroll	1	8
Marsing Middle School	Joe Wing	1	70
Midvale Elementary School	Varina Picket	1	12
Riverside Elementary School	Bonnie Dufty	1	30
Riverside Elementary School	Jennifer Woodhull	1	35
Shadow Hills Elementary School	Kenney Jeffries	1	35
Thomas Jefferson Charter School	Carol Ozuna	1	32
Trail Wind Elementary School	Meko Meyers	1	30
Washington Elementary School	Jan Damron	1	45
Wood River Middle School	Jeremy Silvis	1	30

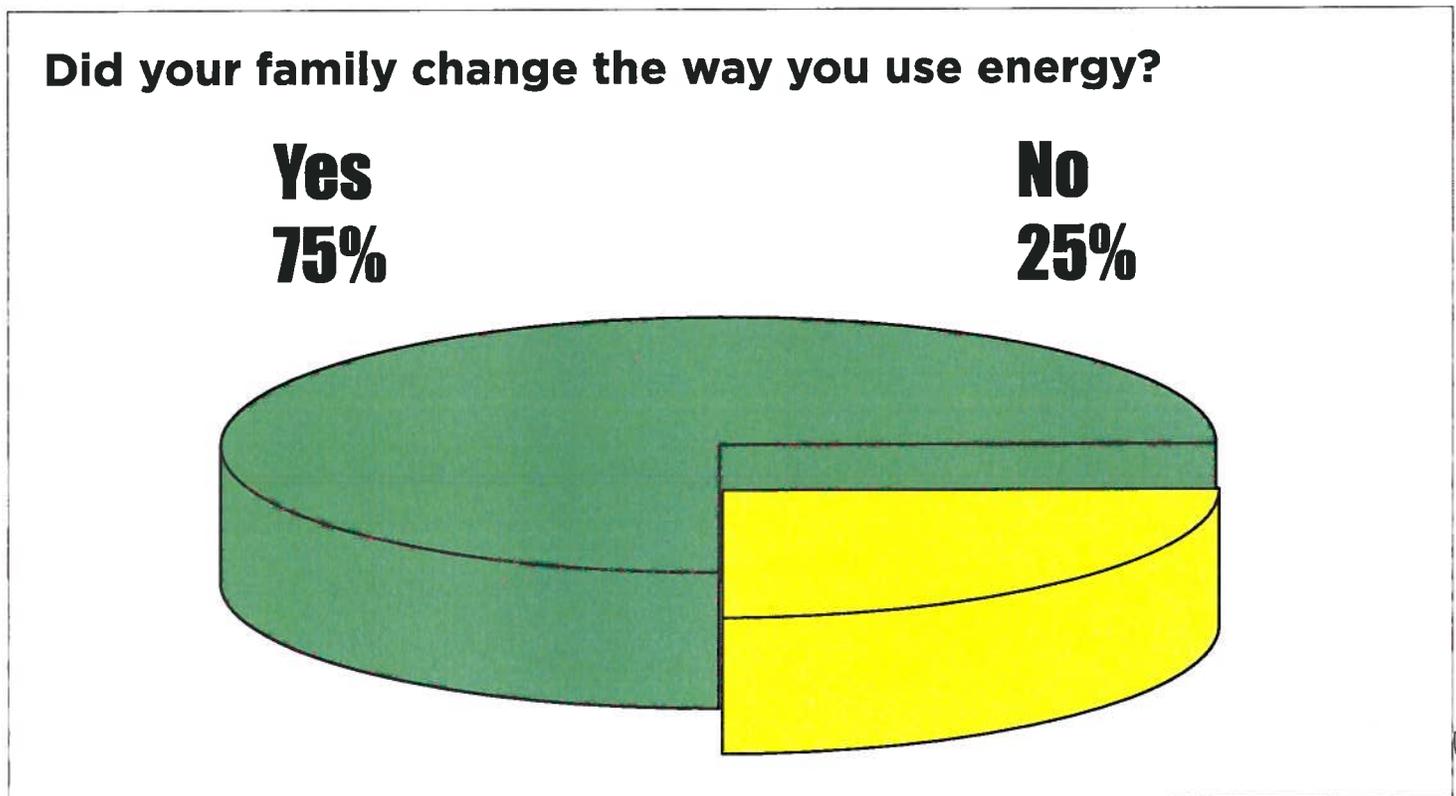
<i>Totals</i>	37	1008
<i>Total Participants</i>	1045	

The Idaho Power Energy Wise Program has had a significant impact within the community. As illustrated below, the Program successfully educated a portion of the community about energy efficiency while generating resource savings through the installation of efficiency measures in homes. Home audit and installation information was collected to track savings and provide household consumption and audit data to sponsors. Program evaluations and comments were collected from teachers, students and parents. The following program elements were used to collect this data:

### A. Home Survey and Retrofits

Upon completion of the Program, participating families are asked to complete a home survey to assess their resource use, verify product installation, provide demographic information and measure participation rates. A few samples of questions asked are below while a complete summary of all responses is included in the appendices.

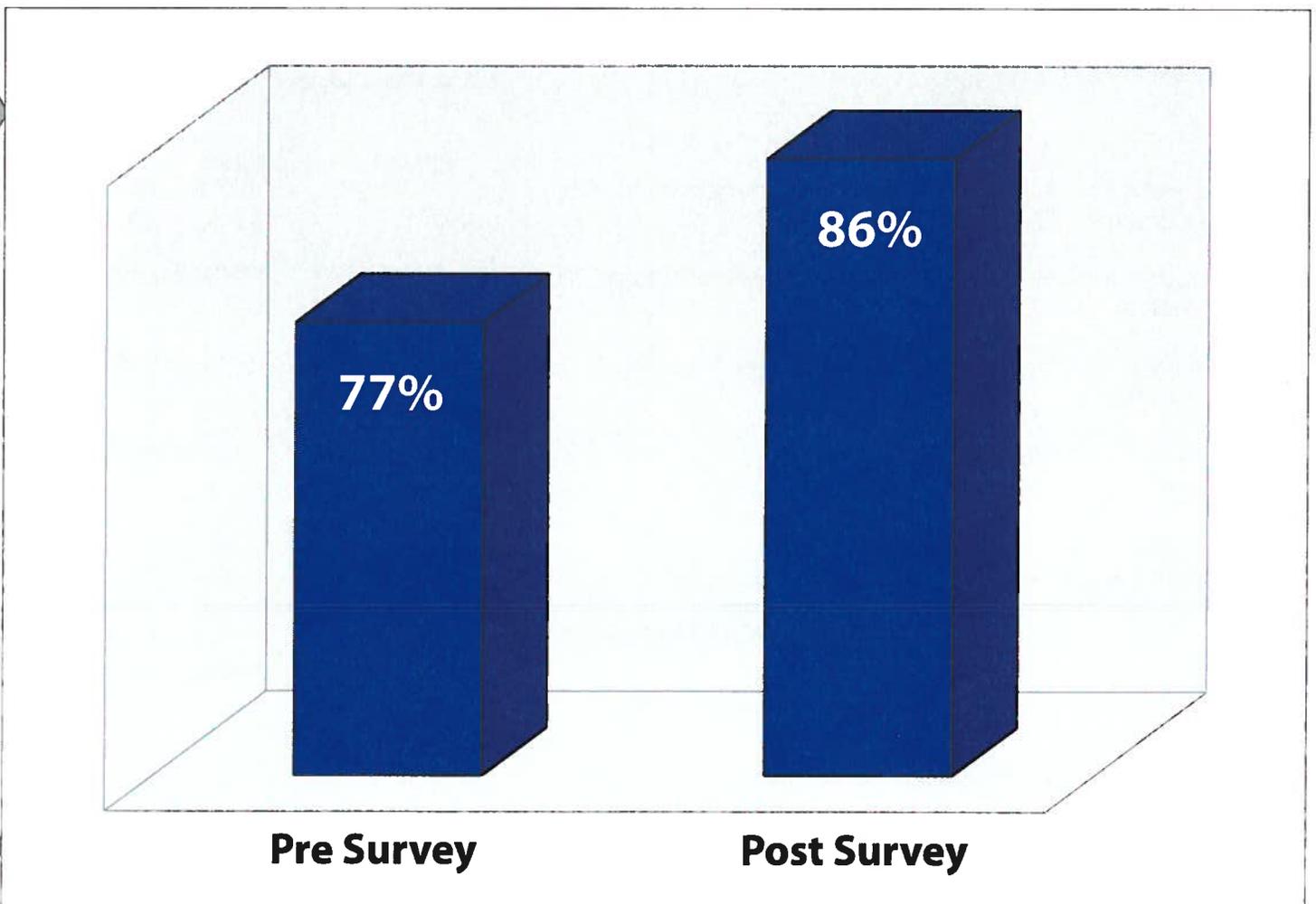
<b>Did your family install the first Compact Fluorescent Lamp (CFL)?</b>	<b>Yes - 78%</b>
<b>Did your family install the LimeLite® Night Light?</b>	<b>Yes - 88%</b>
<b>Did your family change the way you use energy?</b>	<b>Yes - 75%</b>



**B. Knowledge Gained**

Students were asked to complete a ten question survey before the Program was introduced and then again after it was completed to determine the learning impact and the knowledge gained through the Program. The average student answered **7.7** questions correctly prior to being involved in the Program and then improved to answer **8.6** questions correctly following participation.

**Scores improved from 77% to 86%**





## C. Energy Savings Summary

As part of the program and working with parents or guardians, students installed resource efficiency measures in their homes. They also measured the pre-existing devices to calculate savings that they generated. Using the family habits collected from the customer survey information as the basis for this calculation, one thousand forty-five (1,045) households are expected to save the following resource totals. Savings from these actions and new behaviors will continue for many years to come.

### Projected Resource Savings

Number of Participants:

1,045

	<u>Annual</u>	<u>Lifetime</u>
Reduction from the 23 watt compact fluorescent lamp (CFL): Product Life: 10,000 hours	91,634	627,627 kWh
Reduction from the 18 watt compact fluorescent lamp (CFL): Product Life: 10,000 hours	58,266	399,086 kWh
Reduction from the 13 watt compact fluorescent lamp (CFL): Product Life: 10,000 hours	40,156	275,044 kWh
Reduction from the night light: Product Life: 10 years	28,074	280,741 kWh
Reduction from the air filter alarm: Product Life: 10 years	33,858 4,524	338,580 kWh 45,238 therms
<b>TOTAL PROGRAM SAVINGS:</b>	<b>251,989 4,524</b>	<b>1,921,078 kWh 45,238 therms</b>
<b>TOTAL PROGRAM SAVINGS PER HOUSEHOLD:</b>	<b>241 4</b>	<b>1,838 kWh 43 therms</b>

## D. Participant Response

Program improvements are based on participant feedback received from each program. Students, teachers and parents are each asked to evaluate relevant aspects of the program. Each response is reviewed for pertinent information to both the Program and the Program Sponsor. The following is a sample of feedback collected during the Program.

### Teacher Response

(A summary of responses can be found in Appendix C)

100% of participating teachers indicated they would conduct the Program again given the opportunity.

100% of participating teachers indicated they would recommend the Program to their colleagues.

#### **In my opinion, what the students like best about the material/Program was:**

*"The hamburger story and the activities were a student grabber!"*

Dan Kuka, Canyonside Christian School

*"...teaching the math end of this Program. The students can actually see the savings and they share that with their parents."*

Mark Bowman, Indian Hills Elementary School

*"The incentives, hands-on supplies, and additional activities were great!"*

Carolyn Dudley, Indian Hills Elementary School

*"It was very easy to use as all the materials were organized in one area."*

Varina Picket, Midvale Elementary School

## Teacher Response (cont.)

### As a teacher, what I liked best about the materials/Program was:

*"...the fun lessons!"*

Ingrid Jungen, Highlands Elementary School

*"...the good lessons to teach students about conservation of energy."*

Janice Paradis, Council Elementary School

*"The Kit was fantastic! I enjoyed the lesson plans. They were well thought out."*

Toni Wright, Indian Hills Elementary School

*"The home Kits were great and the student booklets were nice."*

Meko Meyers, Trail Wind Elementary School

### In the future, one thing I would change would be:

*"...the furnace filters, because it was very challenging."*

Ingrid Jungen, Highlands Elementary School

*"...the global apple activity! Knives are not allowed at school. May I suggest using chocolate oranges that break into slices?"*

Mark Bowman, Indian Hills Elementary School

*"Some workbook activities were a bit wordy."*

Carolyn Dudley, Indian Hills Elementary School

*"...some of the activities."*

Meko Meyers, Trail Wind Elementary School

## Teacher Letter

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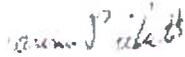
April 18, 2010

Dear Idaho Power,

Thank you so much for sponsoring the Energy Wise Program for our class. The students learned valuable lessons about conserving electricity, water, and none renewable resources. The Energy Wise workbooks were used by all the families in my classroom to assist them in reducing the cost of power in their homes. The parents were very positively responsive the program as a whole. My students and I have also learned about the cost of electricity use and especially water usage which is very important in our small rural farming community.

Thank you again for sponsoring this program and I encourage you to continue sponsoring these programs in the future.

Sincerely,



Varina Pickett

5/6 grade teacher

Midvale, Idaho

**Parent Comments:** From both a utility and teacher perspective, parent involvement with program activities and their children is of paramount interest. When parents take an active role in their child's education it helps the schools and strengthens the educational process considerably. When students successfully engage their families in the retrofit and home efficiency projects, utility efficiency messages have been powerfully delivered to two generations in the same household. The Program is a catalyst for this family interaction, which is evidenced by the parent comments which are received each year. An excerpt is presented below.

## Parent Response

### What comments would you like to express to your child's program sponsor?

*"Thank you! Loved the samples."*

Sarah and Jeff Morris, Eliza Hart Spalding Elementary School

*"Our child thought the night light was really neat."*

Anonymous, Spalding Elementary School

*"Thank you."*

Jennie Waters, Council Elementary School

*"Very good Program."*

Mike Paradis, Council Elementary School

*"It was fun to do."*

Bert and Jill Aloshire, Council Elementary School

*"Good job and thanks for including and teaching our children about being wise about electricity usage."*

Mitu Smith, Indian Hills Elementary School

*"All I have to say is that it was a great Program for my child to do and learn about. Thank you so much."*

Rick Meade, Marsing Middle School

*"Thank you very much. It was a pleasure working with my daughter on this."*

Denise Dollar, Indian Hills Elementary School

## **Parent Response (cont.)**

*"Thank you!"*

Amy Brown, Indian Hills Elementary School

*"My child had fun doing the Program."*

Jeri Flores, Castleford Elementary School

*"Thanks for providing such good information."*

Diana Scott, Filer Elementary School

### **As a parent which aspect of the Program did you like best?**

*"We liked Taylor "teaching" us to be more energy efficient."*

Sarah and Jeff Morris, Eliza Hart Spalding Elementary School

*"I liked the dirty-filter alarm. This is one area that I know we can be improved."*

Mary Kestner, Indian Hills Elementary School

*"The free Kit items are a great way to try products. I like the aspect of children learning how they can conserve energy."*

Anonymous, Spalding Elementary School

*"...showing the kids how to help save money."*

Jennie Waters, Council Elementary School

*"...savings benefits."*

Mike Paradis, Council Elementary School

*"...working with my child and getting CFLs to use."*

Bert and Jill Aloschire, Council Elementary School

*"The teachers are teaching the children about energy."*

Sylvia Murch, Washington Elementary School

*"My daughter came home all excited about what she learned. She now keeps lights turned off and loves the night light."*

Mitu Smith, Indian Hills Elementary School

*"I liked the thing that told you when you need to change your filter on your furnace."*

Rick Meade, Marsing Middle School

## Parent Response (cont.)

*"I liked that it showed how much energy you can save by using the CFLs and how much money you can save as well."*

Denise Dollar, Indian Hills Elementary School

*"I liked that it taught kids about conserving energy and the CFLs!"*

Amy Brown, Indian Hills Elementary School

*"I like saving energy."*

Stephanie Jacob, Filer Elementary School

*"It opened the children's eyes as to how much energy is wasted in our household."*

Jeri Flores, Castleford Elementary School

*"I didn't know there were some other ways to save energy such as the filter tone alarm."*

Stephaney Osburne, Perrine Elementary School

*"...teaching children and parents to save power."*

Jody Mondragon, Perrine Elementary School

*"...learning about the watts needed and saving power."*

Cheri Conner, Perrine Elementary School

*"...making the kids aware of energy savings."*

Judy Davidson, Harrison Elementary School

*"...to see how much money you can save."*

Diana Scott, Filer Elementary School

**E. Program Enhancements**

In addition to increasing resource awareness and efficiency, the Program strengthens bonds between sponsors and their communities. The Program has been designed from start to finish with this in mind. Some of the steps taken to ensure our sponsors receive the greatest possible exposure are as follows:

**Promotion of Sponsor Programs:** Program materials can be used to publicize and boost enrollment in additional efficiency program opportunities. This option was not used however, Energy Wise can easily promote residential programs such as toilet replacement or other programs.

**Custom Branding:** Each Resource Action Kit was labeled with the Idaho Power logo. In addition to the Resource Action Kit, the Introduction to Parent Letter, and Teacher Program Evaluation featured sponsor branding.

**Parents/Guardians: SAVE up to...**

**\$146\* per year on your utilities!**

See reverse side for details

What would your family do with an additional \$146? Your family has been selected to participate in the exciting Energy Wise! Program. The educational Program is being provided to your child at NO COST to you, the school, or the district. Your family can save up to \$146\* on your home utility bills! On average, that's about 2.3 tanks of gas!

**WHO:** Your child

**WHERE:** At school and at home

**WHEN:** Your child's teacher will establish a time line for activities to be completed

**WHAT:** Idaho Power has teamed up with Resource Action Programs to bring you the Energy Wise Program, a nationally acclaimed program developed to teach students easy and effective ways to use energy more efficiently in their homes. Over the last 15 years hundreds of thousands of families across America have participated in this effective and enjoyable learning experience which has yielded tremendous energy savings for families just like yours! Your child will receive a Energy Wise Kit valued at \$60 which includes high-quality, high performing products utilizing the latest in energy efficient technologies. Your child will receive practical homework assignments designed to help you measure home energy use, as well as actual devices to install which will help your family save money. Every assignment will closely follow state education curriculum standards for science and math and will teach lasting energy efficient practices.

**WHY:** You will save money in your home, which can save you and your family up to \$146 per year!

All materials and instruction will be provided and additional Program support can be obtained by calling the Resource Action Programs Information Center toll-free at 1-888-GET-WISE. Help your child complete the activities provided with the Program and save up to \$146\* per year on utilities.

See reverse side for more details on the Energy Wise Program Savings!




www.idahopower.com

**Energy Program EVALUATION**

In an effort to improve our Program, we would like your assessment of the Energy Wise! Program. Please take a few moments to fill out this Teacher Evaluation Form. Upon completion, please return the form in the self-addressed postage-paid envelope along with the results you collected. Don't forget to enroll for next year saving the form on the back of this sheet.

**REMEMBER:** **DON'T FORGET TO RETURN THIS FORM WITH YOUR CLASSES SCATTERED BY JUNE 1ST TO RECEIVE A \$100 NINE GRANT FOR YOUR CLASSROOM.**

School \_\_\_\_\_  
Teacher \_\_\_\_\_  
District \_\_\_\_\_

**Idaho Power**  
an IDACOR company

**Please check the box that best describes your opinion:**

	STRONGLY DISLIKE	DISLIKE	NEUTRAL	LIKE	STRONGLY LIKE
1. The materials were attractive and easy to use	<input type="checkbox"/>				
2. The materials were clearly written and well organized	<input type="checkbox"/>				
3. The conversation cards made the kit very easy for students to use	<input type="checkbox"/>				
4. I indicated individual that this person assessed the Program again?	<input type="checkbox"/>				
5. If you had the opportunity, would you conduct the Program again?	<input type="checkbox"/>				
6. If you recommended the Program to other colleagues?	<input type="checkbox"/>				

In my opinion, the thing the students like best about the materials/Program is \_\_\_\_\_

In the future, one thing I would change would be \_\_\_\_\_

As a teacher, the aspect of the Program materials I found best was \_\_\_\_\_

Total number of students participating and receiving kit is: \_\_\_\_\_

Total number of classroom forms returned: \_\_\_\_\_

Teacher Signature: \_\_\_\_\_

Date: \_\_\_\_\_



## Appendix Contents

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## Projected Savings from 13 Watt CFL Retrofit

Average length of use:	1460 hours per year <sup>4</sup>
Product life:	10,000 hours <sup>2</sup>
Average incandescent light bulb uses:	60 watts per hour
Compact fluorescent light bulb uses:	13 watts per hour
Energy saved per year	69 kWh
Energy saved over life expectancy:	470 kWh

Installation / participation rate of:	56%	<sup>3</sup>
Number of Participants	1,045	<sup>3</sup>

Reduction from compact fluorescent light bulb:	
Annual kWh:	40,156 kWh
Lifetime kWh:	275,044 kWh

<sup>2</sup> Provided by manufacturer.

<sup>3</sup> Data reported by program participants.

<sup>4</sup> Assumption (4 hours per day)

## Projected Savings from 18 Watt CFL Retrofit

Average length of use:	1460 hours per year <sup>4</sup>
Product life:	10,000 hours <sup>2</sup>
Average incandescent light bulb uses:	75 watts per hour
Compact fluorescent light bulb uses:	18 watts per hour <sup>2</sup>
Energy saved per year	83 kWh
Energy saved over life expectancy:	570 kWh

Installation / participation rate of:	67%	<sup>3</sup>
Number of Participants	1,045	<sup>3</sup>

Reduction from compact fluorescent light bulb:	
Annual kWh:	58,266 kWh
Lifetime kWh:	399,086 kWh

<sup>2</sup> Provided by manufacturer.

<sup>3</sup> Data reported by program participants.

<sup>4</sup> Assumption (4 hours per day)

## Projected Savings from 23 Watt CFL Retrofit

Average length of use:	1460 hours per year <sup>4</sup>
Product life:	10,000 hours <sup>2</sup>
Average incandescent light bulb uses:	100 watts per hour
Compact fluorescent light bulb uses:	23 watts per hour <sup>2</sup>
Energy saved per year	112 kWh
Energy saved over life expectancy:	770 kWh

Installation / participation rate of:

78%	<sup>3</sup>
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Number of Participants

1,045	<sup>3</sup>
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Reduction from compact fluorescent light bulb:

Annual kWh:	91,634 kWh
Lifetime kWh:	627,627 kWh

<sup>2</sup> Provided by manufacturer.

<sup>3</sup> Data reported by program participants.

<sup>4</sup> Assumption (4 hours per day)

## Projected Savings from Night Light Retrofit

Average length of use:	4380 hours per year <sup>4</sup>
Average nightlight uses:	7 watts per hour
LimeLite uses:	0.03 watts per hour
Product life:	10 years <sup>2</sup>
Energy saved per year:	31 kWh per year
Energy saved over life expectancy:	305 kWh

Installation / participation rate of:

88%	<sup>3</sup>
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Number of Participants

1,045	<sup>3</sup>
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Reduction from LimeLite<sup>®</sup> night light:

Annual:	28,074 kWh
Lifetime:	280,741 kWh

<sup>2</sup> Provided by manufacturer.

<sup>3</sup> Data reported by program participants.

<sup>4</sup> Assumption (12 hours per day)

## Projected Savings from Filtertone® Retrofit

Annual energy use by air conditioner, heat pump or furnace:	3,000 kWh <sup>2</sup>
Projected increase in efficiency:	3% <sup>1</sup>
Product life	10 years <sup>2</sup>
Energy saved per year:	90 kWh per year
Energy saved over life expectancy:	900 kWh

Annual energy use by air conditioner, heat pump or furnace:	650 therms <sup>2</sup>
Projected increase in efficiency:	1.85% <sup>1</sup>
Product life	10 years <sup>2</sup>
Energy saved per year:	12 therms per year
Energy saved over life expectancy:	120 therms per year

Installation / participation rate of:	36%	<sup>3</sup>
Number of Participants	1,045	<sup>3</sup>

Total reduction from FilterTone® alarm:	Annual:	33,858 kWh
	Lifetime:	338,580 kWh
	Annual:	4,524 therms
	Lifetime:	45,238 therms

<sup>1</sup> Relchmuth P.E., Howard. (1999). Engineering Review and Savings Estimates for the 'Filtertone' Filter Restriction Alarm.

<sup>2</sup> Provided by manufacturer.

<sup>3</sup> Data reported by program participants.

## Home Survey and Retrofit Data

### Section I - Home Check-up

#### 1 What type of home do you live in?

Single family home	80%
Multi-family (2-4 units)	16%
Multi-family (5-20 units)	4%
Multi-family (21+ units)	0%

#### 2 Was your home built before 1992?

Yes	50%
No	50%

#### 3 Is your home owned or rented?

Owned	73%
Rented	27%

#### 4 How many kids live in your home (age 0-17)?

1	14%
2	36%
3	23%
4	15%
5+	10%

#### 5 How many adults live in your home (age 18+)?

1	15%
2	67%
3	12%
4	5%
5+	1%

#### 6 Does your home have a programmable thermostat?

Yes	64%
No	36%

#### 7 What is the main source of heat in your home?

Natural Gas Furnace	41%
Electric Heater	38%
Propane	4%
Heating Oil	1%
Wood	9%
Other	7%

## Section I - Home Check-up

**8** What type of air conditioning unit do you have?

Central Air Conditioner	64%
Evaporative Cooler	6%
Room Unit	13%
Don't Have One	16%

**9** Does your home have a dishwasher?

Yes	79%
No	21%

**10** How is your water heated?

Natural Gas	38%
Electricity	62%

## Section II - Home Activities

<b>1</b>	Did your family install the first Compact Fluorescent Lamp (CFL)?	Yes	78%
		No	22%
<b>2</b>	If you answered "yes" to question 1, what was the wattage of the incandescent bulb you replaced?	60-watt	33%
		75-watt	14%
		100-watt	9%
		Other	12%
		Don't Know	17%
		Didn't install the CFL	16%
<b>3</b>	Did your family install the second Compact Fluorescent Lamp (CFL)?	Yes	67%
		No	33%
<b>4</b>	If you answered "yes" to question 3, what was the wattage of the incandescent bulb you replaced?	60-watt	23%
		75-watt	23%
		100-watt	7%
		Other	8%
		Don't Know	12%
		Didn't install the CFL	27%
<b>5</b>	Did your family install the third Compact Fluorescent Lamp (CFL)?	Yes	56%
		No	44%
<b>6</b>	If you answered "yes" to question 5, what was the wattage of the incandescent bulb you replaced?	60-watt	23%
		75-watt	8%
		100-watt	15%
		Other	8%
		Don't Know	11%
		Didn't install the CFL	35%
<b>7</b>	Did your family install the LimeLite <sup>®</sup> Night Light?	Yes	88%
		No	12%
<b>8</b>	Did your family raise the temperature on your refrigerator?	Yes	22%
		No	78%

**9** Did your family lower your water heater settings?

Yes	28%
No	72%

**10** Did your family install the Filtertone® Alarm?

Yes	36%
No	64%

**11** How much did your family turn down the thermostat in winter for heating?

1-2 degrees	20%
3-4 degrees	16%
5+ degrees	9%
Didn't Adjust Thermostat	54%

**12** How much did your family turn up the thermostat in summer for cooling?

1-2 degrees	16%
3-4 degrees	13%
5+ degrees	10%
Didn't Adjust Thermostat	60%

**13** Did you work with your family on this program?

Yes	82%
No	18%

**14** Did your family change the way they use energy?

Yes	75%
No	25%

**15** How would you rate the Energy Wise® program?

Great	43%
Pretty good	38%
Okay	17%
Not so good	2%

## Teacher Evaluation Data

### 1 The materials were attractive and easy to use.

Strongly Agree	67%
Agree	33%
Disagree	0%
Strongly Disagree	0%

### 2 The materials and activities were well received by students.

Strongly Agree	50%
Agree	50%
Disagree	0%
Strongly Disagree	0%

### 3 The materials were clearly written and well organized.

Strongly Agree	83%
Agree	0%
Disagree	17%
Strongly Disagree	0%

### 4 The conservation technologies were easy for students to use.

Strongly Agree	83%
Agree	17%
Disagree	0%
Strongly Disagree	0%

### 5 Students indicated that their parents supported the program.

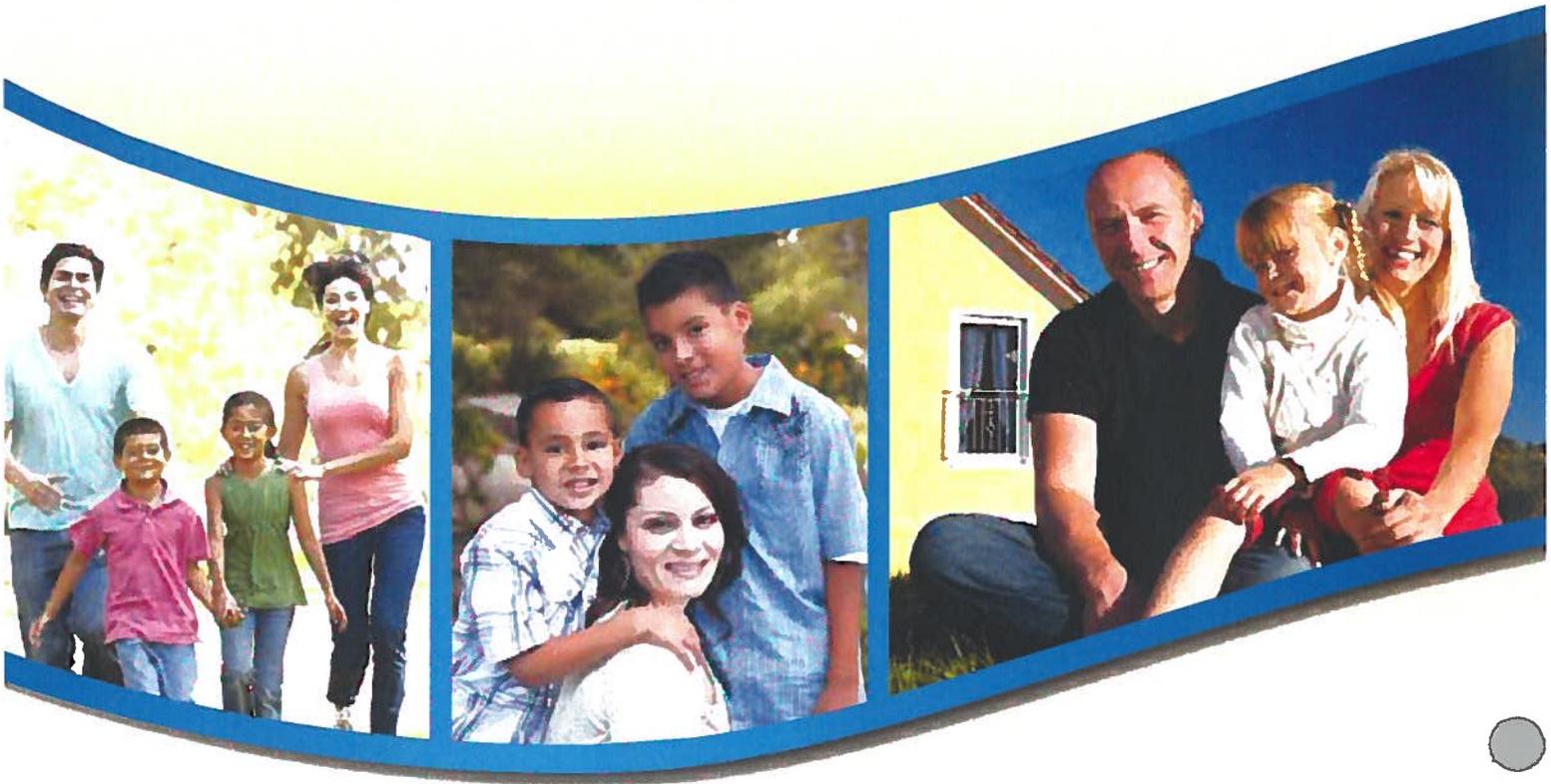
Strongly Agree	50%
Agree	50%
Disagree	0%
Strongly Disagree	0%

### 6 If you had the opportunity, would you conduct this program again?

Yes	100%
No	0%

### 7 Would you recommend this program to other colleagues?

Yes	100%
No	0%



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