



Energy Efficiency Solutions Program

Annual Report - 2013



Report Contents

The overall results of Black Hills Power's Energy Efficiency Solutions (EES) Program in year two (September 1, 2012 through August 31, 2013) are summarized in this report.

- Program Highlights - Page 2
- Adaptive Management Strategies - Page 3
- Program Results Attachment A
- Educational and Promotional Events Attachment B

BHP submitted an application on June 7, 2013 to amend the adjustments associated with the EES Program. The request was to reduce the Energy Efficiency Solutions Adjustment (EESA) charge to customers based on the participation rate and costs experienced in the Program. The South Dakota Public Utilities Commission (SDPUC) approved the new EESA rates with an effective date of August 1, 2013. The corresponding goals for all of the energy efficiency measures were modified and used in this report.

Program Highlights

Residential Program. Highlights of the Residential program include the following:

1. Residential: Water Heating. This measure was popular with our customers. There were 51 participants compared to the goal of 33, an increase of 32 participants over year 1.
2. Residential: School Based Education. Our goal in year 2 was to provide energy efficiency education materials to 250 students and teachers outside of Rapid City. 246 students and 7 teachers participated in the program from schools in Belle Fourche, Spearfish and Sturgis. The feedback received from the students and their parents continues to be very positive. The teachers who participated also indicated they would repeat the program if given the opportunity.
3. Residential: Weatherization. BHP increased its weatherization goal from 18 to 25 homes in the fall of 2012, and would have exceeded the goal had two of the homes not canceled on the scheduled day of the event.
4. Residential: Air Source Heat Pumps (ASHP). BHP achieved 89% of our ASHP goal. 32 customers installed high efficiency air source heat pumps.
5. Residential: Geothermal Heat Pumps. The goal was met - 3 customers installed geothermal (also referred as ground source) heat pumps.

6. Residential: ASHP Retro-Commissioning. The goal of 100 was exceeded. 107 heat pumps were provided the retro-commissioning (brought to as close to as new condition) service.

Commercial & Industrial Program. Highlights of the C&I program include the following:

1. Lighting. Customer participation continues to grow in the Prescriptive Lighting program. The kWh savings more than doubled compared to the 1st year. Area vendors and electricians are aggressively seeking opportunities to sell energy efficient lighting.
2. Custom Rebates. Energy savings were more than 6 times higher compared to the year 1 annual report – the majority of projects were custom lighting. This trend will likely continue and a number of projects are already underway.
 - a. Custom Lighting Rebates. BHP continues to experience a high interest from customers to convert to LED lighting. Customers see that LED technology will be a primary lighting source. In some instances, the usage can be reduced by 70% while still achieving the same amount of illumination when converting from incandescent to LED.
 - b. Custom Heat Pump Rebates. One large project received a rebate associated with a geothermal heat pump system. We still have three other projects that have been completed and will receive their rebate in the 1st Quarter of 2014.

Adaptive Management Strategies

BHP reported in our previous annual report that significant changes were going to be implemented on our website. These changes were completed in early 2013. To highlight energy efficiency, the www.BHPSaveMoney.com link was created and all of our promotional materials now reference the link.

Energy Efficiency Awareness Day (EEAD). BHP hosted the EEAD at the Rushmore Mall again in the fall of 2012. This event was not as effective in promoting energy efficiency as we would like it to be. Going forward, BHP decided to host local EEADs in several locations throughout our service territory in the fall of 2013. These events had to be postponed since they were scheduled during the major snow storm in early October. One of the locations was rescheduled for December 6th at the Canyon Lake Senior Citizens Center. This event will feature the Center's recently completed LED Lighting Project where they are realizing over 25% energy savings.

Residential Energy Audits. In an effort to get more participants, BHP is looking for opportunities to offer several measures whenever possible to maximize efficiency. For example, the weatherization that was completed in 2013 in Rapid City also included full energy audits. Any opportunities to promote more than one energy efficiency measure will be encouraged.

Advertising. The participation in some of the program measures is directly impacted by the amount of advertising. For example, BHP's refrigerator recycling applications were lagging throughout year 2, but when advertising was increased, applications increased. We will continue working towards strategic advertising for all our programs.

Future Strategies. BHP has initiated the study to support continuing the EES Program beyond the pilot program stage. We anticipate additional measures will be included in the new Program in order to increase participation levels. The Total Resource Cost (TRC) test will be used to evaluate each measure. Applied Energy Group (AEG) has been contracted to complete the study and provide the supporting documentation for the Program. AEG was BHP's consultant for the initial EES Program.

Education Outreach, Community Events and Trade Ally Promotion

The marketing efforts associated with the promotion of BHP's EES Program are summarized in Attachment B. The events were well attended by vendors, contractors and customers.

Summary

Black Hills Power's program results in Year 2 have increased for commercial projects, primarily lighting retrofits, and remained level with Year 1 in the residential sector.

The commercial lighting retrofits are expected to continue at an increasing rate and three large geothermal projects will be completed as part of our pilot program.

The adjusted goals are more representative of the current participation levels.

BHP looks forward to the completion of a new study which will support the continuation of offering the EES Program to our customers.