Program Evaluation Plans

The purpose of program evaluations are to measure and help insure cost effective program performance, customer service and inform future program revisions. Program evaluations provide information for Rocky Mountain Power management, regulators, program delivery staff and third party delivery vendors. Rocky Mountain Power regularly evaluates demand side management programs in each state and uses specialized third party evaluator contractors competitively selected to evaluate specific programs for specific periods.

Rocky Mountain Power's evaluators will employ a mix of qualitative and quantitative tools to fulfill the purpose of program evaluations including cost effectiveness assessments, impact and process evaluations. Rocky Mountain Power and their evaluation contractors recognizes the customer impacts of evaluations and try to minimize unnecessary contacts while still acquiring the necessary information. Goals and tasks common to all program evaluations are presented below. Unique elements to be considered for each program are then presented. A report outline and evaluation timeline is also included.

Goals of the cost effectiveness assessment:

1. Provide an assessment of program performance without the time or expense of a full impact evaluation. Each installed measure will be assumed to have achieved the deemed savings developed during the planning stage or as calculated and reported during program delivery. A cost effectiveness only assessment is typically used during ramp up periods and or between comprehensive impact evaluations
2. Calculate actual program performance for the period using actual expenditures, measure mix, participation counts and the standard cost effectiveness models.

Goals of the impact evaluation:

1. Estimate gross energy (kWh) and demand (kW) savings
2. Estimate net energy (kWh) and demand side (kW) savings
3. Calculate program cost effectiveness with net savings

Goals of the process evaluation:

1. Identify if key program elements such as incentive levels, incentive delivery, service incentives and information components are performing as designed.
2. Identify issues or opportunities regarding program delivery and administration
3. Recommend any needed changes

Tasks to perform the cost effectiveness assessment

1. Extract and verify energy and capacity savings, project costs, measure types, etc. data from company or third party administrator data base.
2. Extract and verify utility program costs by category from data bases.
3. Compare energy and capacity savings estimates with those developed during planning process, as applicable, i.e., deemed unit savings.
4. Calculate program performance for the period using actual costs, actual savings, and net to gross assumption used during the planning process employing standard cost effectiveness models.

Tasks to perform the impact evaluation:

1. Extract energy and capacity savings, project costs, measure types, etc. data from company or third party administrator data base.
2. Verify energy and capacity savings, project costs, measure types, etc. data from company or third party administrator data base.
    a. Review the quality assurance process to verify each of these steps has been fully implemented.
    b. In addition, the evaluator will independently review a sample of the quality assurance and inspection reports.
    c. Based on this review the evaluator will assess the level of additional verification (including on-site measurement and verification) required,
3. Extract and verify utility program costs by category from data bases.
4. Select a statistically valid sample of participants and validate reported gross energy savings through appropriate engineering.
    a. Engineering or statistical methods include
        i. Unit Energy Consumption (UEC) data bases
        ii. Simulation modeling
        iii. Engineering calculations
        iv. Billing analysis (including Princeton Scorekeeping Method) [1]

[1] Princeton Scorekeeping Method[1] (PRISM), an established weather-normalizing tool, especially well suited to residential customers since it can calculate each individual customer's annual energy consumption under average weather conditions. Utilizing historical weather data and billing records, PRISM adjusts for the impact of weather variations upon usage during both the pre and post periods. The result is weather-normalized and annualized data that allow for the meaningful interpretation of the true impact of the Program upon energy consumption. The evaluator will use difference-of-means tests to analyze disparities between the participants and non-participant billing data.

5. Perform on-site inspections and short term equipment monitoring on statistically selected sample to determine:
    i. Validity of quality assurance process
    ii. Original assumptions used in analysis were reasonable
    iii. Analysis methods are appropriate
    iv. Measures were installed as planned
    v. Measures operated as planned
6. Employ a combination of customer and contractor surveys, equipment sales data and other resources unique to the programs to quantify the activity that would have occurred absent the program. This activity is known as free-ridership. Quantify activity among non-participants that was influenced by the program. This activity is known as spillover.
    a. Estimate existing and improved equipment and equipment operation practices and resulting efficiency levels.
    b. Estimate equipment and equipment operation practices and resulting efficiency levels in the absence of this program.
7. Calculate net to gross ratios including free-ridership and spillover by measure, customer and/or facility type.
8. Calculate program performance for the period using actual costs, actual savings, and updated net to gross assumptions employing standard cost effectiveness models.

Tasks to perform the process evaluation

1) Coordinate with impact evaluation efforts if required
2) Determine survey plan, for interviews with participants, non-participants, utility staff, other key market actors specific to the program.
3) Customer survey design and implementation. Complete telephone or on-site surveys with program participants (customers). The aim of the survey will be to determine:
    a) How each participant learned about the program
    b) Their assessment of the value of the program services
    c) Their estimate of the impact of the Program equipment or services on their energy consumption (in coordination with impact evaluation if required)
    d) Satisfaction with the program administration
    e) Satisfaction with their participation in the Program
    f) Whether they implemented any additional energy efficiency measures as results of the program (in coordination with impact evaluation if required)
4) Customer survey design and implementation. Complete telephone or on-site surveys with program non- participants (customers). The aim of the survey will be to determine:
    a) If the non-participant knew about the program

b) If they partially participated (began, but did not complete the participation process)
c) Any assessment of the value of the program services, especially incentive availability or levels.
d) Satisfaction with the program administration
e) If they implemented any energy efficiency measures that might have qualified for the program.
f) Reasons for not participating

5) Retailer and/or contractor survey design and implementation. After reviewing participant complete telephone surveys with selected non-customer participants such as retailers and/or contractors. The aim of the survey will be to determine:
   a) How each participant learned about the program
   b) Their assessment of the value of the program services to their business.
   c) Impact of the program incentives on their sales volume of high efficiency equipment or services.
   d) Understanding of program requirements
   e) Satisfaction with the program administrator information, training and incentive application processing.
   f) Overall satisfaction with their participation in the program and/or recommendations for program enhancements.
   g) Reasons for not participating, especially those retailers and contractors that had previously been participants.

6) Program administration and utility staff survey design and implementation. The evaluator will interview program administration and utility staff regarding. The aim of the survey will be to determine effectiveness of:
   a) Marketing
   b) Customer application process(es)
   c) Customer eligibility criteria, verification process and quality assurance
   d) Vendor relations
   e) Program data collection
   f) Utility, implementer and other program coordination

Evaluation elements unique to the Energy Star New Homes Program

Process Evaluation

The process evaluation will include interviews with builders, program administration staff, utility staff and participants.

Survey Builders

The evaluator will interview builders of each home type: single family custom, single-family volume and multifamily. The interviews will cover:

- Participation Agreement and application process
- Incentive fund allocation process
- Eligibility criteria and the verification process
- Program training sessions
- Program satisfaction
- Impact of program on building practices
- Suggested changes or improvements

Survey Program Administration and Utility Staff

The evaluator will interview program administration and utility staff regarding:

- Application process
- Eligibility criteria and the verification process
- Marketing
- Builder relations
- Program data collection
- Utility and implementer coordination

Participant Survey Design and Implementation

The evaluator will complete telephone surveys with Program participants. The aim of the survey will be to determine how each participant learned about the Program, their assessment of the value of the Energy Star package, impact of the Energy Star package on their purchasing decision, satisfaction with their purchase and whether they implemented any additional energy efficiency measures. In addition, the evaluator will collect information about Program participants' characteristics (demographics and home characteristics).

Develop Findings and Recommendations

The evaluator will analyze the collected data and opinions to assess Program strengths, weaknesses, bottlenecks, areas of improvement, and best practices.

Impact Evaluation

The impact evaluation will include collecting key data, selecting a random sample of participants, estimating energy savings, and assessing cost effectiveness. The impact evaluation approach will vary by type of measure installed.

Measure verification

PacifiCorp has a comprehensive quality assurance process in place for this program consisting of:

- Independent HERS raters provide Energy Star certification to each individual home
- The HERS service provider will verify the information supplied by the rater to apply a second layer of quality control.
- Company account management and technical support staff will provide a final check on quality and will test a sample of the homes. Specific activities include:
  - Identification of sample homes
  - Internal plan analysis to generate a HERS score/index
  - Comparison of program HERS score with rater's score/index
  - Identification of score/index differences greater than .5
  - On-site visual inspections by monitoring raters to determine that they are following proper protocol

PacifiCorp intends to take remedial action as required based on the quality assurance results.

The evaluator will review the quality assurance process to assure that each of these steps has been fully implemented. In addition the evaluator will independently review a sample of the HERS reports. Based on this review the evaluator will assess the need for on-site verification.

Establishment of Baseline Efficiency Levels

Determination of what would have happened in the absence of the effort is key in assessing the effects of an efficiency program. Through review of available secondary research and collection of primary data, the evaluator will characterize the baseline efficiency levels and the expected saturation of Energy Star construction in the new construction market.

Specifically, the evaluator will characterize:

- Estimated efficiency levels and high efficiency construction, lighting and appliance market shares with the Program
- Estimated efficiency levels and saturation of high efficiency construction, lighting and appliances in the absence of this Program effort

- Estimated efficiency levels and saturation of high efficiency construction, lighting and appliances in the absence of historical efforts

Primary research planned will include interviews with developers and builders to determine:

- The share of standard and Energy Star construction
- The share of lighting and appliances sold and installed at standard and high efficiency levels
- The perceived awareness and interest of consumers in high efficiency construction, lighting and appliances
- Awareness and understanding of the Energy Star label
- The importance of various Program aspects (i.e., marketing and educational materials, incentives) in encouraging the purchase of Energy Star homes and appliances

The evaluator will conduct short phone interviews with builders and developers for this task.

Evaluation Reports

Program evaluations will be available in report format and provide a complete description of the relevant evaluation objectives and how they were achieved. The final report will contain the following elements:

- Executive Summary
- Description of the program, its goals, and objectives
- Statement of the evaluation goals and objectives
- Discussion of methodologies
- Implementation procedures and assumptions for each method
- Data-collection procedures and methods
- Sample design and selection.
- Results and their interpretation
- Conclusions including recommendations for changes
- Appendices with supporting data including engineering calculation, surveys, etc. as required.

Energy Star New Homes Evaluation Timeline

Timeline

1. Cost effectiveness assessments for the prior program year will be available no later than March 31 of the following year.
2. Initial process evaluation for 2005 was completed in November 2006 and is available upon request.
3. Planned impact and process evaluations for program years 2006 and 2007 will be completed by February 2009.
4. Planned impact and process evaluations for program years 2008 and 2009 will be completed by February 2011.