



AMEREN ACTONENERGY STANDARD AND CUSTOM INCENTIVE PROGRAMS: VERIFICATION AND DUE DILIGENCE

Final

Prepared for:

AMEREN ILLINOIS UTILITIES

Prepared by:

OPINION DYNAMICS CORPORATION

230 Third Avenue

Third Floor

Waltham, MA 02451

(617) 492-1400

www.opiniondynamics.com

Contact: Bill Norton, Vice President

June 2009

TABLE OF CONTENTS

- 1. INTRODUCTION.....1**
- 2. SUMMARY AND RECOMMENDATIONS.....2**
- 3. DATA COLLECTION.....3**
- 4. DETAILED FINDINGS4**
- APPENDIX A: QUALITY CONTROL AND VERIFICATION BEST PRACTICES.....8**

TABLE OF TABLES

Table 1. Summary of Quality Assurance Activities in Place and Recommendations 2

Table 2: In-Depth Interviews 3

1. INTRODUCTION

This report provides the results of Task 2 – Verification and Due Diligence – for the ActOnEnergy Standard and Custom Incentive Programs. Under this task, we explored the quality assurance and verification activities currently carried out by program and implementation staff. We compared these activities to industry best practices¹ for similar business programs to determine:

1. If any key quality assurance and verification activities that should take place are currently not implemented.
2. If any of the current quality assurance and verification activities are biased (i.e., incorrect sampling that may inadvertently skew results, purposeful sampling that is not defensible, etc.).
3. If any of the current quality assurance and verification activities are overly time-consuming and might be simplified or dropped.

This assessment primarily relied on depth interviews with program and implementation staff and documentation of current program processes as outlined in the Technical Reference Manual.

The remainder of this report includes a summary of current key quality assurance and verification activities and recommendations; an overview of data collection activities carried out for this task; and detailed findings on current quality assurance and verification activities by program. The appendix presents quality assurance and verification best practices for similar business programs and a brief description of the activities conducted by the ActOnEnergy Standard and Custom Programs with respect to these best practices.

We will provide a similar assessment in Program Year 2 for ActOnEnergy Business programs that were not fully launched during Program Year 1.

¹ See the Best Practices Self Benchmarking Tool developed for the Energy Efficiency Best Practices Project: <http://www.eebestpractices.com/benchmarking.asp>.

2. SUMMARY AND RECOMMENDATIONS

Overall, Ameren’s quality assurance and verification procedures for the ActOnEnergy Standard and Custom Incentive Programs are rigorous and ensure high quality projects and tracking data. In particular, the programs are strongest in the areas of post-inspection, verification of project documentation, and assessment of customer satisfaction. Suggested improvements focus on refining sampling practices and formalizing the program ally network.

Table 1 summarizes the quality assurance and verification activities currently carried out by the Standard and Custom Incentive Programs. It also presents recommended changes to current procedures, as well as suggestions regarding additional activities that Ameren could implement to enhance current quality assurance and verification.

Table 1. Summary of Quality Assurance Activities in Place and Recommendations

QA Activities in Place	Recommended Change
<ul style="list-style-type: none"> • Eligibility checks 	<ul style="list-style-type: none"> • None
<ul style="list-style-type: none"> • Engineering review 	<ul style="list-style-type: none"> • None
<ul style="list-style-type: none"> • Pre and post inspections 	<ul style="list-style-type: none"> • Develop pre-inspection guidelines • Inspect the first project from a new contractor
<ul style="list-style-type: none"> • Customer satisfaction survey 	<ul style="list-style-type: none"> • None
	<p>Additional recommended activities:</p> <ul style="list-style-type: none"> • Screen contractors/program allies

3. DATA COLLECTION

Data for this task was gathered through depth interviews with the following program and implementation staff. The Application Processing Checklist and Custom and Standard Revised Technical Review Process contained within the Technical Review Manual were also reviewed as part of this task.

Table 2: In-Depth Interviews

Program	Person	Date Interviewed
Standard and Custom Incentive	Cheryl Miller (AIU)	04/16/09
Standard and Custom Incentive	Lance Escue (SAIC)	04/22/09
Standard and Custom Incentive	David Gibson (SAIC)	04/28/09
Standard and Custom Incentive	Dean Jurecic (GDS)	04/29/09

4. DETAILED FINDINGS

Standard and Custom Incentive Programs

Customer Eligibility

Upon receipt of an application, customer eligibility is checked by entering the account number provided on the application into the AIB database where it is cross-referenced against Ameren's customer information. Ameren customer information is imported into AIB for this purpose. An application cannot be entered into AIB and labeled as a project until the account number is verified. Once the account number is deemed valid and the customer verified as eligible, project information is entered into both the AIB database and Project Tracking Log (PTL), and the application review process begins.²

Assessment: Ameren's procedures for the verification of customer eligibility are successful in ensuring only eligible customers participate in the programs. No changes are needed in this area.

Pre-Approval

Prior to September 11, 2008 when the standard program became oversubscribed, pre-approval of standard incentive applications was not required.³ However, for those customers that chose to submit their application for pre-approval, the application went through two levels of review: the first by the assigned technical reviewer and a second by the lead technical reviewer. Both reviews are designed to check that the measures listed are eligible based on the program criteria, and that all of the calculations provided by the applicant are correct.⁴

Pre-approval for custom projects has always been required and, similar to the standard program, there are two tiers of application review. The main difference in the pre-approval process for custom versus standard projects is in the type of information reviewed. For custom projects, the technical reviewer must consider payback period and incremental cost windows, as well as the custom calculations of energy savings done by the applicant. As a result, the pre-approval process for custom projects is more rigorous in nature than that for standard projects.

During the pre-approval process, customers completing standard or custom projects with an incentive amount greater than \$25,000 are also asked to submit a large incentive request form. Submitted forms are reviewed by the program manager and contain information on the project cost, energy savings, project payback, and associated benefits. Applicants also

² The PTL was developed prior to AIB and was used to manage project information while AIB was still in development. The program has continued to use it and, at present, it provides a check on the data in AIB.

³ When the standard program became oversubscribed on September 11, 2008, customers were allowed to apply for incentives towards standard measures through the custom program. However, the applications were evaluated based on the custom project criteria (i.e., payback period, incremental cost, operating hours).

⁴ In Program Year 2, pre-approval is required for all standard projects.

sign a statement indicating that their project would not be completed without the Ameren financial incentive.

Ameren reserves the right to pre-inspect any project site and has yet to waive that right for any applicant despite requests to do so. The decision to conduct a pre-inspection is based on the review of submitted application materials. While there are no specific criteria guiding this process, a project that is expected to receive a large incentive, or is approaching the incentive cap of \$100,000 for a given facility, will likely be inspected. In addition, projects that are unusual, unique or particularly complex may be selected for pre-inspection by the technical reviewers. The reviewers and program manager may also request a pre-inspection at their discretion if something in the application does not look right or raises a concern.

Once an application has gone through the technical review process it is sent to the SAIC program manager and the administrative assistant with a recommendation that they issue the pre-approval letter. The letter is created and reviewed by the program manager before any of the customer application data is entered into AIB. The programs attempt to ensure high data quality by limiting the number of people with responsibility for data entry. The majority of project information and dates in AIB and the PTL are entered by the program's administrative assistant. This individual also has the responsibility for making all modifications to AIB except when a technical reviewer needs to update measure information to aid in the review process. Administrative assistants have sole authority to modify PTL entries. There is, however, no documented double-checking of entered data.

Assessment: The program has sufficient pre-approval procedures to ensure a thorough review and verification of planned project activities. Pre-inspections occur among a portion of projects and given the adoption of a pre-approval requirement for all projects, applications receive two rounds of engineering review.

In Program Year 2, Ameren should consider creating more formalized pre-inspection criteria, as well as creating a check on information entered into AIB throughout the approval process. The former can serve a valuable role in increasing the percentage of pre-inspections, which were approximately 7% for the Standard Program and 12% for the Custom Program during Program Year 1. Creating a mechanism to verify project information in AIB would be useful in guaranteeing accuracy, but may not be essential at this time.

Final Approval

After installing eligible measures, the customer submits the application for final approval and payment. Prior to September 11, 2008, this could be the first time program staff would see information about a standard project (because pre-approval was not required). Nonetheless, during this period, the final review process was the same for projects that had received pre-approval and those that had not. This is also the process currently in use by the program.

During the final review process, the technical reviewers look again at the measures installed and validate any custom calculations. In addition, the reviewer compares the dates and equipment descriptions from submitted invoices and purchase orders with the final application. The reviewer will work with the customer or their contractor to resolve any issues related to missing or incomplete information.

Similar to the pre-approval process, the lead technical reviewer conducts a secondary review of all final applications. In addition, the SAIC program manager conducts a review of final applications with incentives over \$25,000 and applications where the incentive amount has changed compared to the pre-approval amount.

In some cases, an inspection of installed measures is conducted during the final review process in order to verify project completion. Post-inspections are done for all customers and projects that meet the following criteria:

- The customer will receive an incentive over \$25,000, or
- The customer will receive an incentive over \$2,500 and is located within 60 miles of Peoria, Champaign, or St. Louis.

A post-inspection may also be done for projects that do not meet these criteria, but where the technical review staff or program manager identifies an inconsistency or otherwise feels there is reason for concern.

Inspections are conducted mainly by technical review staff, but the program manager and others involved in the program have participated in the past. The inspector fills out an inspection form, which confirms that the installed measures were visually inspected and consistent with expectations. The inspector also takes a series of pictures documenting the installed measures. While on site, the inspector also performs an energy audit of the facility to identify possible lighting, compressed air, and other energy efficiency opportunities.

Upon completion of on-site verification activities, the lead technical reviewer or program manager requests that an approval for payment letter be issued, and AIB is updated with the relevant project information. Before payment is made, two additional quality assurance steps are taken. First, approved applications for payment are collected over a one week period and reviewed in their entirety by the program manager. Second, once the approved applications have been processed by the administrative assistant, a list of all the projects in the payment queue is sent out to the technical reviewers for their confirmation that the list appears to be correct.

Assessment: Ameren's final approval process is strong. Multiple people conduct each engineering review, invoices and installation records are verified, and post-inspections are done for the largest and most uncertain projects while balancing administrative costs. In addition, inspectors have the experience necessary to successfully fulfill their role in the process.

In order to further enhance the quality assurance and verification done as part of the final approval process, Ameren should evaluate the feasibility of inspecting the first project submitted by a new contractor. Instituting this practice would help ensure quality control among contractors involved in the program either as an affiliated program ally or independent participant. Ameren can also strengthen the program's quality control procedures by randomly sampling projects by contractor and measure types.

Additional Activities

The following activities are not currently part of Ameren's verification and due diligence procedures for the Standard and Custom Incentive Programs. Adopting practices in this area

could improve the program's quality assurance and control procedures.

- Contractor Screening: Ameren could further formalize the programs' relationship with their registered program allies by providing them with training on the measures incentivized through the program, as well as installation practices. Developing a certification system for participating program allies is another option available to improve the chance of high quality installations through the program.

APPENDIX A: QUALITY CONTROL AND VERIFICATION BEST PRACTICES

I. Program Design and Structure

1. Base quality control on program's relationship with vendors, number of vendors involved, types of measures, project volume, variability of project size
 - The program's relationship with vendors, particularly whether or not they work closely with any, was not explored as part of the in-depth interview process. If a relationship developed, the need for quality control inspections could be further reduced.
 - Project size, as measured by the incentive amount, is an input in quality control.
2. Assure quality of product through independent testing procedures
 - While this issue was not explored through in-depth interviews, it appears that product quality has been established through ENERGY STAR certification and other energy efficiency rating systems (NEMA, SEER, EER, and SEHA) as demonstrated by the standard application equipment eligibility criteria.
3. Use measure product specification in program requirements & guidelines
 - The standard incentive application contains a table of equipment eligibility requirements for lighting, refrigeration, motors, and cooling systems.
4. Use inspections & the verification function as a training tool for the market, especially for market transformation programs
 - The program has procedures for inspections and verification, but it is unclear whether the program has used these processes to provide training to program participants to reinforce the benefits and optimal use of program measures.
 - This practice is not as relevant for this type of program compared to those that involve measures that require regular maintenance activities.
5. Implement a contractor screening/certification/training process
 - There is no certification or screening process in place for program allies (registered or not). Those who register with the program are asked to abide by the rules and regulations of the program, but there are no additional expectations related to their affiliation with the program.
6. Develop inspection and verification procedures during the program design phase
 - These procedures were created during program development and design.
7. Consider administrative cost in designing the verification strategy

- Administrative cost is an inherent component of the post-inspection strategy, which requires the inspection of all projects with: an incentive of more than \$25,000 regardless of location, and an incentive above \$2,500 and a location within 60 miles of Peoria, Champaign, or St. Louis.

II. Sampling

8. Require pre-inspections for large or uncertain impact projects

- While pre-inspection is not required for any projects, a portion of large projects or those with uncertain impacts receive them.
- There are no set criteria in place to govern the implementation of pre-inspections.
- Pre-inspections are typically done for projects at facilities approaching the incentive cap of \$100,000, or for projects that are larger in size, otherwise unique or particularly complicated.

9. Conduct/Require in-program measurement/impact evaluation (or post-project inspections and commissioning) for the very largest projects or those with uncertain impacts

- Both programs use engineering review as well as onsite procedures (inspection) to assess the impacts of the largest projects.
- Onsite inspection occurs when projects receive an incentive in excess of \$25,000 regardless of geographic location or in excess of \$2,500 and within 60 miles of Peoria, Champaign, or St. Louis.
- Based on information gathered through in-depth interviews, it is also likely for an inspection to be done if the technical reviewer is unsure about the savings estimates submitted.

10. Build in statistical features to the sampling protocol to allow a reduction in the number of required inspections based on observed performance & demonstrated quality of work. Use a “good” random sample.

- This is not necessary for the standard and custom programs given that Ameren is attempting to inspect a census of the largest projects.

11. Always inspect the first job submitted by a new vendor

- At present, inspection procedures appear to be based solely on the size of the incentive and the proximity of the project site to Peoria, St. Louis, or Champaign.

12. Obtain a good sample of vendor and measure types

- This topic was not discussed during in-depth interviews.

III. Inspection Procedures

13. Ensure inspectors have plenty of hands-on-construction practice

- Employing inspectors with hands-on construction practice is comparable to Ameren's use of its technical review staff (or occasionally the program manager) to conduct pre and post inspections. While the formal training of these individuals was not assessed as part of the in-depth interview process, technical reviewers have extensive engineering experience and knowledge of the measures incentivized through the program.

14. Conduct an independent audit or pre-installation inspections

- Pre-inspections are conducted as part of both programs, although with less frequency than post-inspections and without a specific set of criteria guiding project selection.

15. Conduct on-site post-installation inspections

- Inspections are conducted regularly according to the criteria outlined in the Sampling section above.

16. Govern post-inspection levels by cost-effectiveness considerations and results from an initial set of inspections early in the implementation process

- Cost-effectiveness is an inherent aspect of the current post-inspection protocols, described in the Sampling section above.

17. For de-lamping projects, use light level requirements and pre- and post-light level readings to ensure quality

- This topic was not discussed during in-depth interviews.

IV. Final Application Review

18. Verify accuracy of rebates, coupons, invoices to ensure the reporting system is recording actual product installations by target market

- Customers are required, as part of the program terms and conditions, to submit copies of all invoices or other reasonable documentation of the costs associated with purchasing the incentivized equipment. External labor costs are considered a part of the overall project cost.
- As part of the application review process, technical reviewers compare invoices and purchase orders to the application information to confirm that the claimed measures were actually installed at the specified time.

V. Evaluation

19. Assess customer satisfaction with the product through evaluation

- The program implementer is in the process of developing a customer satisfaction survey. The current evaluation effort will also gauge customer satisfaction with the Standard and Custom Incentive Programs.
- Program ally satisfaction was also assessed during Program Year 1 using a program ally survey administered by the program.

20. Tie staff performance to independently verified results

- The AIU/SAIC Business Services Statement of Work specifies that program performance metrics include evidence of the achievement of energy savings goals.

