

Illinois Evaluation Framework: Guiding Principles

Version 1.0: (April 7, 2009)

Introduction and Overview

The purpose of this document is to memorialize Energy Efficiency Stakeholder Advisory Group (EE SAG) discussions and recommendations on how Evaluation, Measurement and Verification (EM&V) studies should be planned and conducted in Illinois (IL). The recommendations in this document may change over time in response to changes in statutory and regulatory directives and as IL EE stakeholders gain greater experience with evaluation.

The principles set forth in this document are intended to provide guidance to the evaluation contractors who conduct IL evaluations and to help ensure consistent approaches across evaluations. However, as the EE SAG is an advisory body, these principles are merely guiding, rather than binding, principles.

NOTE: Issues highlighted in yellow indicate further discussion needed or lack of consensus based on initial SAG discussions.

1. Application of Evaluation Results: Retrospective vs. Prospective

- Use a primarily prospective impact evaluation system.
- Focus impact evaluation on measurement of individual parameters and/or realization rates that can be applied going forward.
- Could be some limited retrospective application of impact results
 - When, For How Long?
- Consider requiring retrospective verification.
- Develop a binding schedule for impact evaluation activities.

2. Application of Net Savings Results

- View the most important functions of estimating net savings as being to:
 - Incentivize administrators to get savings that would not otherwise occur

- Support the efficient allocation of resources across programs and measures
 - Improve program design and implementation
- Apply net savings results in exactly the same, primarily prospective manner as for all other parameters.
- Use the same approach for all applications of net savings results (e.g., assessing goal attainment, redesigning programs, B/C analysis)

3. Approaches to Deeming of Savings Parameters

- Use either "engineering estimates" or deemed values from other states as placeholders until impact results are available.
- For "engineering estimates", either use simple engineering algorithms (formulas) or simulation models. In some cases, simulation models give the best results because the simulations can take many variables into account.
- For deemed values, consider using values from other states for measures that are not weather sensitive. If a state with similar measures has done several DSM cycles, their deemed values have incorporated several layers of review over time plus corrections for sequential evaluation studies.
- If the measures are affected by weather and building type then results from states with similar weather can be used and weather zones and building types can be worked in to simulation models for more exact estimates.
- For large industrial settings where DSM savings occur through improvement in manufacturing processes (such as through improvements in handling compressed air), savings can't be deemed but must be calculated.

4. Methods for Estimating Net Savings

- Establish consistent approaches regarding what broad *classes* of methods (e.g., self-reporting, econometric, market-based) to use for which kinds of programs and situations.
- Balance investment in the estimation of net-to-gross ratios with investment in the estimation of gross savings parameters.
- Invest the most in estimation of net savings in cases where the NTGR is the most uncertain.
- In cases where the NTGR is likely to be uncertain and the savings are substantial, consider using multiple methods.
- Don't over-do it. Keep in mind that extreme accuracy is typically neither feasible nor necessary.

- When it comes to uncertainty, worry the most about measurement error that operates consistently in the same direction across programs. At the portfolio level, most other uncertainties will tend to come out in the wash.
- Anticipate that NTGRs will evolve over time as the program matures.
- Plan on multiple rounds of NTGR analysis, both to provide early feedback to be used in improving program design, and to capture changes in NTGRs.
- To the extent self-reporting is used, develop standardized instruments at the statewide level to ensure consistency and comparability.
- When is it appropriate to use values from other states versus measure?

5. Sampling and Measurement Error

- Do not have specific quantitative standards regarding statistical precision.
- Planning for impact evaluation should include systematic consideration of sources of both sampling and measurement error.
- Across programs, limited impact evaluation resources should be allocated in a manner that minimizes overall uncertainty (including both sampling and measurement error) about total portfolio impacts.
- Similarly, across impact evaluation activities within an individual program, resources should be allocated in a manner that minimizes overall uncertainty about total program impacts.
- Efforts to minimize sampling and measurement error should be explicitly balanced.
- Impact evaluation activities should be designed and staged to lead to a systematic, cumulative reduction in uncertainty over time.

6. Principles Governing Allocation of Resources

- Focus more resources in the areas that seem to have the greatest effects in making results uncertain.
- At the same time, evaluation is more than monitoring for compliance. It should contribute to development of stronger measures, more effective programs, and new technologies and approaches, and is necessary to help us move from "Plan B" DSM (like Energy Star) to "Plan C" DSM (like the "Go Deep" 1000 Homes Project).

7. IL FAUN (DEER-lite)

Purpose: Public, electronic repository of deemed/default values used for electric and gas program planning and reporting to ensure values are public, available to all, transparent and consistent

- MEEA to host

- Web-based, searchable database
- Also contains workpapers (explanation of how values are derived using consistent format)
- Will cover prescriptive measures, not custom projects (perhaps 50% of savings)
- Common protocols for measuring and reporting savings from custom projects developed with input from EM&V contractors

8. Evaluation Planning Process

- Don't try to plan all evaluation activities immediately and in detail for the entire 3-year planning period
- Develop high-level strategic plan that addresses issues such as
 - Allocation of resources across evaluation functions, programs, years and tasks
 - High-level staging of activities
 - Approach to key issues such as coordination
- Develop detailed Work Plans one year at a time

9. Coordination Between Evaluation Contractors

- Develop coordination process for establishment of initial deemed savings values
- Develop overall written plans for coordination to be discussed with SAG

10. Common Tools and Templates

The Program Administrators agree to harmonize the following documents to ensure consistent evaluation and reporting across programs:

- Program Proposal Template (Template from ComEd; Ameren, DCEO filing)
- Monthly Reports to SAG (Attachment B)
 - Will be circulated three weeks after the close of the month
 - Will not be presented to SAG, but SAG members can ask questions about reports at SAG meeting
- Quarterly Reports to SAG (Varies)
 - Will contain some common information (savings/costs)
 - Will also contain utility and program-specific information
 - Quarterly Reports will be presented to SAG on following schedule:
 - June – August (Q1) – Sept SAG
 - Sept – Nov (Q2) – Dec SAG

- Dec – Feb (Q3) – March SAG
- March – May (Q4) – June SAG
- Work Plan Format (Attachment A)
- Content and Format of Evaluation Reports (To Be Developed)

Attachment A: Work Plan Template

Evaluation Work Plan Template (for each program)

- 1) **Approach** -- What is the general evaluation approach for the program (general discussion of evaluation approach, including research objectives, researchable questions, methodological framework, and high-level schedule)?
- 2) **Impact evaluation** -- How will first year gross energy savings and gross demand reduction values be determined? If a deeming process is proposed for the first year, how will the process be carried out and when will results be available?
- 3) **Free Riders/Drivers & Net-to-Gross** -- How will NTG be assessed for this program for the first program year? How will data gathering for NTG be scheduled for the first program year, and when will results be available?
- 4) **Baseline** -- What kind of market baseline will be established for this program? What approach will be used? When will a market baseline be completed?
- 5) **Metrics** -- What are the metrics to be collected for the program?
- 6) **Tracking System** -- When will the program vendor's tracking system be reviewed? When will a report on the program vendor's tracking system for the program be ready?
- 7) **Budget** -- what is the planned evaluation budget for each year? Demonstrate that the total across programs is within the 3% annual spending cap. How does the evaluation budget for this program fit as part of the total evaluation budget, and what criteria are used to allocate evaluation budget among program evaluations?
- 8) **Jobs** -- How will the evaluation track job creation associated with the program? What is the count of jobs created directly by hiring people to work on the program and the evaluation? What is the count on persons from out-of-state who are assigned to a base in Illinois? Which jobs (and percentage of personnel expenditure) will be filled from staff and new hires in-state and which out-of-state? What classification system should be used? When will a report on jobs be available? Note that this is not proposed as a sophisticated or broad based economic impact study.

- 9) **Program Theory** -- What is the program theory for this program? When will a program theory and logic model be available?
- 10) **QA/QC** -- How is quality control and/or quality assurance implemented for this program? When will a report program QA/QC be available?
- 11) **Process Evaluation** -- What will be the approach to process evaluation for this program? What will be the elements of the process evaluation? When will the process evaluation be completed?
- 12) **Reporting** -- How will monthly or quarterly reporting of work in progress, goals and results, barriers encountered, changes in program and/or evaluation direction be reported? Monthly and/or quarterly evaluation reporting should be uniform across programs.
- 13) **Year One Details** for each program (Note that the details could be in a separate section of the Evaluation Work Plan, or be collected in a separate document).
 - a. Specific tasks and sub-tasks
 - b. Detailed schedules
 - c. Detailed discussion of sampling, data collection, data cleaning, and analysis methods
 - d. Project and management milestones
 - e. Identification of staff resources
 - f. Detailed cost breakdowns
 - g. Dates of deliverables

