

2018 Evaluation Plan

Ameren Illinois Company Energy Efficiency Programs – Non-Energy Impacts Evaluation Plan

Draft

August 8, 2018

Table of Contents

[1. Non-Energy Impacts Research 1](#_Toc521509729)

[1.1 Introduction 1](#_Toc521509730)

[1.2 Evaluation Approach 2](#_Toc521509731)

[1.2.1 Research Objectives 2](#_Toc521509732)

[1.3 Evaluation Tasks 3](#_Toc521509733)

[1.4 Evaluation Budget and Timeline 5](#_Toc521509734)

Table of Tables

[Table 1. Summary of Cross-Cutting NEI Evaluation Activities for 2018 3](#_Toc521509736)

[Table 2. NEI Evaluation Schedule and Budget 5](#_Toc521509737)

# Non-Energy Impacts Research

## Introduction

Illinois stakeholders have expressed an interest in better understanding the non-energy impacts (NEI) of Ameren Illinois’ 2018-2021 portfolios. NEIs are the impacts that energy efficiency programs produce in addition to energy savings and demand reduction.[[1]](#footnote-1) The energy efficiency industry recognizes three types of NEIs:

* **Utility**: Outcomes for the utility sponsoring the energy efficiency program. Benefits commonly focus on reduced (avoiding) utility administrative costs due to customers’ program participation (e.g., reduced arrearages, improved services).
* **Participant**: Ancillary outcomes that participants experience due to making program upgrades at their home or business, with benefits commonly focusing on but not limited to outcomes like increased occupant health, safety, and comfort, or reduced operations and maintenance costs at the participating facility that are specific to the efficient upgrade.
* **Societal:** Changes in the general population’s welfare due to the economic, environmental, health and safety, and distribution system outcomes that spill over from program upgrades. These types of NEIs can be captured at a portfolio-wide level, given their societal scale. Job creation[[2]](#footnote-2) and emissions reductions are examples of societal benefits.

Throughout the 2018-2021 evaluation cycle, the Opinion Dynamics team will conduct research around NEIs associated with AIC’s programs. While the IL-TRM currently accounts for some NEIs (water savings, carbon emissions, and some operation and maintenance costs), often there are additional impacts of the efficiency work that are more difficult to quantify. We plan to first explore NEIs associated with the Income Qualified, Public Housing, and Multifamily initiatives as we recognize that these initiatives provide services to customers who may benefit from these programs to a degree not currently captured in recent evaluations. We will support quantitative assessments by developing a short set of NEI screening questions to be applied as part of Income Qualified and Multifamily participant surveys fielded in early years of this cycle. In addition, we will explore the degree to which NEIs may exist for all of AIC’s other initiatives through literature review and program analysis. Based on those findings, we will develop plans for additional research to support the quantification of NEIs.

This work plan outlines the tasks Opinion Dynamics will complete to establish an inaugural NEI assessment framework for the AIC 2018-2020 portfolio and produce estimates of targeted NEIs in 2018. Notably, we plan to:

* **Coordinate with NEI efforts already underway in Illinois to support a statewide approach.** We will develop the framework in coordination with the NEI evaluations underway for the other Illinois utilities. We will also support development of an Illinois-wide methodology, balancing a need for consistency across utilities with the need to accommodate unique evaluation needs of different jurisdictions (e.g., demographics, weather, housing stock, fuel mix) and program portfolios. We have already begun conversations with other Illinois evaluators and plan to continue them throughout the cycle. We also plan to discuss NEIs with the SAG to ensure a consistent understanding outside of program evaluation teams on how NEIs will be researched.
* **Complete a phased research effort, first developing a portfolio-wide research plan.** Because AIC is assessing NEIs for the first time during its 2018-2020 portfolio, our first step is to develop a portfolio-wide NEI evaluation framework. As part of this, we will summarize current NEI evaluation best-practices, including methods used in other Illinois evaluations. Drawing on those findings, we will recommend a list of priority NEIs (e.g., with a defensible link to program activity and for which established evaluation methodologies exist) for primary research. Following the framework, we will then develop data collection and reporting tools for use in individual program evaluations.
* **Estimate high-priority NEIs for select programs.** NEIs are relevant to initiatives in both business and residential channels, but Illinois evaluators and stakeholders are currently prioritizing NEIs for income eligible and multifamily programs. At a minimum, we expect to explore health and safety improvements for these residential initiatives in our early NEI work, and then plan to expand assessments to other impact categories in subsequent years.
* **Outline next steps for NEI assessment for subsequent years in the cycle.** We will conclude the research with a synthesis of NEI findings from the 2018 evaluation and recommend next steps for the remainder of the 2018-2021 program cycle, including how and when to assess impacts for additional NEIs and initiatives not examined in 2018. NEI research will comprise an important part of the 2018-2021 evaluation cycle, as described in the 2018-2021 Multiyear Evaluation Plan.

## Evaluation Approach

### Research Objectives

The evaluation team will explore a number of process-related research questions as part of the 2018 evaluation:

1. Which AIC 2018-2021 programs and initiatives are likely to produce NEIs? Which NEIs might result from each initiative? How do initiative activities (e.g., efficiency upgrades) produce these NEIs?
2. Which NEIs can be qualitatively assessed for programs in the AIC portfolio? Which can be quantified? To inform future cost-effectiveness testing, which NEIs could be monetized, and how (e.g., primary vs. secondary research)?
3. How applicable are available NEI assessment methods and researched values to the AIC service territory, including those put forth by other Illinois evaluators? What adjustments may be needed to reflect the AIC context?
4. Which NEIs are most suitable for an initial quantitative assessment?
5. What types of survey data are needed to quantify key participant NEIs for AIC’s residential programs? Do 2018 participants perceive changes in these outcomes, as applicable to the upgrades they have made or received?
6. What data and information are needed to support future NEI assessments?

## Evaluation Tasks

Table 1summarizes the 2018 NEI assessment activities.

Table . Summary of Cross-Cutting NEI Evaluation Activities for 2018

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Activity | Impact | Process | Forward Looking | Details |
| Review Literature |  |  | 🗸 | Assesses and summarize existing NEI research and explain how the evaluation team plans to leverage it for the AIC 2018-2021 portfolio. Note which NEIs appear to be quantifiable and monetizable. |
| NEI Map by AIC Initiative |  |  | 🗸 | Enumerate specific NEIs expected to stem from each AIC initiative and provide a roadmap for studying key NEIs in the 2018-2021 cycle (documenting the rationale for selecting key NEIs and proposing a timeline for incorporating results into evaluation reporting and planning). |
| Develop NEI Evaluation Tools |  |  | 🗸 | Develop a short battery of participant survey questions that can be used to assess key participant NEIs for the Income Qualified and Multifamily initiatives. To the extent we can leverage data collection activities already planned for these initiatives, we will do so. Benchmark monetary values of these NEIs in AIC service territory, leveraging existing assumptions used by other Illinois evaluators. Demonstrate a methodology for combining inputs to produce a quantitative assessment of the key NEI. |
| Ad Hoc Evaluation Support |  |  | 🗸 | Consult with ongoing AIC evaluation leads to ensure NEI information is collected consistently across initiatives in 2018 and beyond; develop reporting tools to ensure NEIs are explained and documented consistently across the portfolio. |
| SAG and Cross-Utility Coordination |  |  | 🗸 | Participate as needed in SAG meetings and coordinate with other Illinois utilities’ evaluators to ensure consistent approaches are used |

We describe each activity below in detail.

#### Task 1. Review Literature

We will review existing NEI assessments and methodologies, with a focus on those already developed or proposed in Illinois and which can be leveraged to support NEI assessment of the AIC 2018-2021 portfolio. We plan to include existing Illinois NEI plans and reports,[[3]](#footnote-3) the Future Energy Jobs Act, prior SAG discussions about treatment of NEIs,[[4]](#footnote-4) and others. Through this, we will assess the state of practice, catalogue methods available to assess and quantify NEIs, and explain how these methods relate to annual program evaluations. We will include a list of common NEIs by program type, outline which are readily quantifiable and monetizable, and note which are already included in the IL-TRM vs. which could be considered for future inclusion, and which are referenced as part of the Future Energy Jobs Act.

We will synthesize results into a summary memo. The memo will help the evaluation team prepare to collaborate with other Illinois evaluators and serves as our point of early feedback with AIC.

*Deliverable:* Literature Review Findings Memo *Deliverable Date:* August 2018

#### Task 2. NEI Map by AIC Initiative

In this task, we will extend our literature review (Task 1) by linking the NEI evaluation framework to AIC’s 2018-2021 programs. We will map AIC initiatives (residential and commercial) to NEIs drawing on information from program implementation plans, program-tracking data, transcripts of program staff interviews, and others. We will also complete a deeper dive into classifying NEIs by benefit magnitude, analytical complexity, and likelihood that quantifying the NEI will require Illinois-specific primary data.

The main outputs will be a matrix showing which AIC programs are expected to produce specific NEIs and highlighting areas prime for the first NEI assessment (e.g., areas not only where NEIs are expected to be relatively large, but also where data exists/can be readily collected to qualitatively assess, quantify, and monetize the benefit). Our goal is to recommend a prioritized list of NEIs that, if tracked and quantified, could have the relatively largest effect on AIC programs and their evaluated benefits. We will present a roadmap and timeline showing how we plan to research each of these NEIs during the 2018-2021 cycle, highlighting any data collection needs.

*Deliverable:* NEI Matrix and Evaluation Roadmap *Deliverable Date:* September 2018

#### Task 3. Develop NEI Evaluation Tools

As a starting point for NEI evaluations, this task is designed to develop data collection tools that will quantify an initial set of NEIs from residential programs. Note that additional research will be conducted in following years, per the roadmap developed in Task 2. Based on research reviewed to develop this plan, we anticipate that our initial 2018 work will focus on health/safety benefits from Income Qualified and Multifamily residential programs. Moreover, given that the evaluation team is planning to conduct participant surveys for these two initiatives in Fall 2018, we plan to develop survey questions that can be used in this year’s evaluation.

We will collate survey batteries that other evaluators have successfully used to capture self-reported NEIs (e.g., US DOE Weatherization Assistance Program health benefits survey[[5]](#footnote-5)) and tailor them to the AIC context. Given this year’s anticipated focus on health/safety benefits, we envision developing a short participant survey battery that is focused on these benefits. We plan to develop a standard set of questions that, when applied consistently across applicable initiatives, facilitates comparisons about NEI presence, magnitude, and value throughout the portfolio. Questions will focus on enumerating the presence and, where applicable, quantity of the chosen NEI, and will be developed in a manner consistent with existing NEI practice in Illinois.

To support progress towards understanding the role NEIs may play in future benefit-cost testing, will also benchmark the monetary value of the key NEIs captured in the survey battery. Specifically, this task will involve adjusting existing secondary values for a key NEI (e.g., economic value of reduced sick days per participant due to indoor air quality improvements) to reflect economic and social conditions in the AIC service territory (e.g., inflation, cost of living, climate, and others). Finally, this task will also provide generalized evaluation guidance about how to apply survey questions and monetized values to assess NEIs from additional programs moving forward.

*Deliverable:* Participant NEI Survey Questions *Deliverable Date:* August 2018

*Deliverable:* Memo Summarizing NEI Evaluation Tools *Deliverable Date:* November 2018

#### Task 4. Ad Hoc Evaluation Support

This task will provide ad-hoc consulting to ongoing AIC evaluations to ensure that the team collects and reports NEI information consistently across programs. As part of this task we will synthesize portfolio results of any 2018 NEI data collection, providing an infographic or short (2 pages) memo.

*Deliverable:* 2018 NEI Evaluation Results Summary *Deliverable Date:* February 2019

#### Task 5. SAG and Cross-Utility Coordination

This task covers participation in cross-coordination meetings with other Illinois evaluators, and preparing for and attending SAG meetings focused on NEIs.

*Deliverable:* Participation in SAG and Cross-Coordination Methods *Deliverable Date:* Ongoing

## Evaluation Budget and Timeline

Table 2 summarizes the timing and budget associated with each evaluation activity.

Table . NEI Evaluation Schedule and Budget

| Task | Evaluation Task | Deliverable Date | Budget |
| --- | --- | --- | --- |
| X | Scoping and Management | Ongoing | $9,850 |
| 1 | Review Literature | August 2018 | $11,600 |
| 2 | NEI Map by AIC Initiative | September 2018 | $24,650 |
| 3 | Develop NEI Evaluation Tools | August 2018 | $27,500 |
| 4 | Ad Hoc Evaluation Support | February 2019 | $2,000 |
| 5 | SAG and Cross-Utility Coordination | Ongoing | $9,400 |
| **Total Budget** | **$85,000** |

1. For purposes of this plan, we refer to “NEIs,” which capture both positive and negative non-energy outcomes from efficiency programs. Note, however, that ongoing work led by other Illinois evaluators has thus far focused on non-energy benefits (NEBs) and that our team also plans to first focus on benefits and will then turn to costs. [↑](#footnote-ref-1)
2. The Ameren Illinois evaluation team is evaluating job impacts under a separate scope of work, so we do not cover them here. [↑](#footnote-ref-2)
3. Navigant (2018). *Quantifying non-energy benefits from ComEd’s income eligible programs: Findings and recommendations from secondary research*. [↑](#footnote-ref-3)
4. VEIC (2016). “*Documentation of TAC Review of Non Energy Benefits*,” Memorandum to Technical Advisory Committee on 02/09/2016. [↑](#footnote-ref-4)
5. Oak Ridge National Laboratory (2014). *Health and Household-Related Benefits Attributable to the Weatherization Assistance Program*. Available at: <https://weatherization.ornl.gov/Retrospectivepdfs/ORNL_TM-2014_345.pdf> [↑](#footnote-ref-5)