

Memorandum

To: Erin Daughton, ComEd

CC: Rick Tonielli, Jim Fay, ComEd

From: Ryan Wall and Anna McCreery – Guidehouse, Jason Christensen – Cadmus, Michael Frischmann – EcoMetric

Date: August 3, 2023

Re: ComEd ESRPP 2023 – 2027 Evaluation Plan

Introduction

The ENERGY STAR® Retail Products Platform Program (ESRPP) is a national midstream market transformation (MT) program that promotes higher levels of efficiency in consumer goods sold via retail channels. In CY2020, ComEd launched an ENERGY STAR® Retail Products Platform MT program (RPP) in their service territory. Energy Solutions implements RPP for ComEd, and the Northwest Energy Efficiency Alliance (NEEA) facilitates the national program. Guidehouse is working collaboratively with the ComEd team, Energy Solutions, NEEA, Illinois Commerce Commission (ICC), and the Illinois Stakeholder Advisory Group (SAG) MT Working Group (WG) members to examine if the preponderance of evidence (PoE) suggests ESRPP is achieving the desired outcomes, and to consider refining the Energy Savings Framework (ESF).

2023 Evaluation Activities

During 2023, Guidehouse will focus additional attention on activities which support the PoE assessment, as well as continue to support the SAG MT WG, support refining the ESF, and conduct annual impact reporting.

Expert Judgement Panel

As part of the CY2023 evaluation, Guidehouse will convene, in collaboration with ComEd, a structured expert judgement panel for each product category currently incentivized by ESRPP—refrigerators and top-loading clothes washers. Structured expert judgement panels are designed to increase the rigor of the natural market baseline (NMB), ESF estimates, and contribute to building the preponderance of evidence required to assess the program's impacts and progress in transforming the market. The broad topic areas which Guidehouse expects the expert judgement panel to opine on include:

- Topic 1: Insights on current initiative outcomes, and if there are key market actors or stakeholders the initiative is missing.
 - Potential outcomes: Insights to inform potential revisions to logic model or MPI lists, modifications to specific data sources for MPIs, or establishing additional data sources to evaluate MPIs.
- Topic 2: Suggested improvements to program design to better influence retailers and supply chain
 - Potential outcomes: Considerations for future incentive changes, potential adjustments to incentivized configurations, additional program activities to support existing or new initiative outcomes.
- Topic 3: Opinions on natural market baselines and the energy savings framework
 - Potential outcomes: Inclusion of additional data or factors for the NMB, recommended modifications to future forecasts, recommendations for future research to refine the NMB.
- Topic 4: Interactions between participating and non-participating retailers
 - Potential outcomes: Alterations to the fraction of non-participating retailer sales credited to ESRPP.

Prior to conducting the expert judgement panel, Guidehouse will deliver a roadmap for the panel during Q2 2023. The panel roadmap will include additional detail about expert selection, the types of information which will be provided to experts, the specific research topics on which experts will opine, and how the results of the panel will be used to recommend updates to the ESF, program theory or logic model, or program design. We will present the findings and recommendations of the structured expert judgement panels to ComEd and the SAG MT WG.

Participating Retailer Interviews

Each year, on behalf of all the ESRPP Program Sponsors, NEEA conducts in-depth interviews with the national participating retailers. Guidehouse will leverage the results of the national retailer interviews to inform the MPI assessment, and to provide useful program feedback to ComEd during 2023.

During the 2022 participating retailer interviews, the participating retailers provided some feedback regarding Scope 3 emissions reduction goals, and indicated they may be influencing decisions and company practices. Guidehouse will work with NEEA to delve further into this topic during the 2023 evaluation. Guidehouse will participate in the EM&V Task Force to provide input on participating retailer interview goals, and interview guides. Specifically, ensuring that questions related to the influence of Scope 3 emissions goals on various stocking, assortment, and marketing practices, and if these influences are complimentary or conflicting with the desired outcomes of ESRPP.

In ComEd's service territory, there is also a local retailer participating in ESRPP. Guidehouse will conduct an in-depth interview with the local retailer to investigate the influence of Scope 3 emissions, and gather additional insights on any topics asked of the national retailers which have not been asked in previous years. The timing of this task would coincide with the national retailer interviews, which typically occur during Q2 and Q3. Guidehouse plans to conduct in-depth interviews with local retailers in ComEd's territory using the full survey battery every other year to reduce survey burden. However, if there is a direct need for clarification or insights on a

specific topic, Guidehouse will conduct a brief, focused interview with local retailers regarding only those topics even if the full survey was not scheduled to happen that year.

Upon completion of the retailer interviews, Guidehouse will review the responses to make a recommendation on whether the MPIs or ESF should be updated to account for additional driving factors.

Longitudinal web scraping

One key element of the savings calculation methodology applied by NEEA and ComEd in estimating savings attributable to ESRPP is that, when participating Retailers change stocking and product assortment practices in response to the ESRPP interventions, non-participating retailers will respond to market pressure and adjust stocking and assortment practices similarly. To further examine this assumption, in CY2023 the Guidehouse team will continue longitudinal web scraping by pulling data from participating and non-participating retailer websites.

The data the Guidehouse team is scraping from websites includes model numbers, brand types, model types, descriptions, price, availability status, dimensions, and a flag if the appliance is ENERGY STAR® qualified. These data will continue to be tracked and analysed over time to add research to support the following questions:

1. Do participating and non-participating retailers sell similar product categories?
2. Do non-participating retailers lead or lag the stocking and assortment practices of participating retailers?
3. What is the time lag between when participating retailers change stocking and assortment practices and non-participating retailers follow suit?

Guidehouse will deliver a stand-alone web scraping memo detailing the data, analysis, and conclusions in Q4 of 2023. The evaluation team will also include a summary of the web scraping memo in the 2023 final report.

Sales data analysis

The ESRPP data administrator portal provides evaluation data reports which contain most of the data required for measuring net market lift and energy savings. The data administrator portal¹ is a data management tool for retailers and energy efficiency ESRPP program sponsors that provide separate evaluation data reports for each product category. The evaluation data reports contain the following monthly data:

- Unit sales by model number
- Qualified status of model
- Per-unit incentive
- Retailer (for qualified products)

¹ Evaluation data reports are provided via <https://www.retailproductsplatform.com>.

- Inputs for gross savings (energy factor, capacity, etc.)

Each of the five participating ESRPP program retailers provided full category sales data by model number for each product category. The evaluation data reports included sales of each model number by month, the qualified status of each model number in that month, and whether incentives were provided.

The evaluation team will follow the data cleaning protocols outlined in the IL TRM v11.0 Vol. 4², matching models between the portal sales data and the most recent ENERGY STAR® qualified product list (ES QPL) for refrigerators and clothes washers. Once all qualified models of each product category are identified and labeled consistently, the team will separate sales by DOE product class, since ComEd only pays incentives for certain configurations and classes, and since the ESF forecast savings, market shares, and sales separately for each ENERGY STAR® tier and product configuration. The evaluation team will include updates on the following in the annual evaluation report:

- Market share of incented and non-incented units
- Total sales volumes within participating retailers
- Savings by appliance and efficiency tier
- Comparison of sales, market shares, and savings to the natural market baseline
- Extrapolation of savings to non-participating retailers

MPI Assessment

Consistent with market transformation program theory, ESRPP's progress is tracked against short-term, mid-term, and long-term outcomes. In the CY2022 evaluation, Guidehouse completed an initial assessment of three short-term outcomes whose benchmarks were most important to establish early in the program's implementation. The MPIs used to assess these three short-term outcomes were:

- MPI I: "The portion of US households in ESRPP areas and the related total value of all program sponsor incentive budgets".
- MPI III-4: "Program sponsor confidence in the program operations process".
- MPI V: "Retailer consideration of ESRPP qualification in assortment and marketing decisions".

During CY2023, Guidehouse will expand on the MPI assessment to examine additional short-term and medium-term outcomes. This analysis will support the preponderance of evidence assessment detailed in the final evaluation report. During CY2023, Guidehouse will investigate the MPIs shown in Table 1 to provide an update on progress. Guidehouse will deliver an MPI assessment memo in Q4 2023. Guidehouse expects to conduct detailed MPI assessments every other year after CY2023. However, if a specification, test procedure, or standard is revised, Guidehouse would conduct research for related MPIs as close to those events as possible.

² Though TRM v11 is effective for 2023 rather than 2022, the data cleaning protocols formalize a consensus memo between evaluators and the IC, establishing guidelines for data cleaning applicable to CY2022.

Table 1. MPIs Guidehouse will research in CY2023

Outcome (Timing)	Outcome	Market Progress Indicator	2020-2023 Target	Data Sources
I (S)	Program achieves sufficient scale of program sponsors, customers, and incentive budgets to influence retailer decision-making.	Portion of US households in ESRPP areas and the related total value of all program sponsor incentive budgets.	<u>Portfolio-level target:</u> Program represents 25% of nationwide customers and program sponsor incentive budgets grow proportionally.	<ul style="list-style-type: none"> EIA-861 Utility Dataset ESRPP program documents
III (S)	Data platform enables effective program operations processes.	<ol style="list-style-type: none"> Data access and accuracy are sufficient to support product-by-product analysis and participation in the ENERGY STAR® specification process. Speed with which incentives are paid Number of corrections or data errors Program sponsor confidence in program operations process 	<u>Portfolio-level target:</u> <ol style="list-style-type: none"> Data access and accuracy continue to be sufficient to support participation in the ENERGY STAR® specification process. Incentives are paid on time Correction/data error rates are low All program sponsors report confidence in the program operations process. 	<ul style="list-style-type: none"> Longitudinal tracking of data quality indicators available through the data portal (MPIs 1-3) Longitudinal tracking of RPP engagement with ENERGY STAR® revision process (MPI 1) Qualitative evidence from ENERGY STAR® stakeholder interviews (MPI 1) Qualitative evidence from program sponsor interviews (MPI 4)
IV (S)	Reliable market share and portfolio management informs program design and evaluation.	<ol style="list-style-type: none"> Efficient and transparent portfolio management process Annual savings process and evaluation are efficient and verifiable. 	<u>Portfolio-level target:</u> <ol style="list-style-type: none"> Portfolio management process continues to be efficient and transparent. Annual savings process and evaluation work are conducted efficiently and can be verified. 	<ul style="list-style-type: none"> Qualitative evidence from program sponsors interviews (MPIs 1-2) Qualitative evidence from RPP staff interviews (MPIs 1-2)

Outcome (Timing)	Outcome	Market Progress Indicator	2020-2023 Target	Data Sources
V (S/M)	Retailers and merchants incorporate incentives into their assortment and marketing decision-making process.	Retailer consideration of ESRPP qualification in assortment and marketing decisions	<u>Portfolio-level target:</u> All retail partners report using incentives to inform product decisions.	<ul style="list-style-type: none"> Quantitative and qualitative evidence from retailer interviews Qualitative evidence from RPP staff communication Quarterly presentations and information provided by retailers to ESRPP
VI (S/M)	Increase in ENERGY STAR® (or higher tiers) market share for RPP product categories at Participating and Non-Participating Retailers	Market share ESRPP qualified product tiers	<u>Product-level targets:</u> Measurable increase in market share for at least one product (Note: this shift could have a different pace among different products.)	<ul style="list-style-type: none"> Longitudinal tracking of market share and product assortments Web scraping of retailer web sites
VII (M)	Reliable per-unit energy savings value for RPP product categories	Number of product categories (bins, tiers, configurations) with reliable energy savings values	<u>Product-level targets:</u> All active products in portfolio have reliable energy savings values.	Longitudinal tracking of measure planning documentation and methodologies

SAG MT WG Participation

In concert with interested stakeholders and other parties, Guidehouse will continue to assist in refining the protocols and addendums to Attachment C of the IL-TRM. Market transformation programs are inherently dynamic, and Guidehouse expects that the ESRPP evaluation protocol will need to be revisited periodically to ensure it is consistent with the current practices and process of the program. During CY2023, Guidehouse will participate in the SAG MT WG meetings to discuss ESRPP, will participate in any small group discussions related to ESRPP, and will assist with edits to Attachment C and the ESF as needed.

Annual Impact Evaluation

Each year, Guidehouse will conduct an evaluation to verify the reported savings, baseline, and MPI progress consistent with the guidance in the ESF and Attachment C protocols. The annual evaluation report will provide the savings summaries, MPI progress, and recommendations for future activities in accordance with the requirements set in Attachment C.

Future Activities

Based on the current ESF, the savings for some of the product categories that ComEd currently offers through ESRPP will continue through 2027. Guidehouse will continue to conduct research

activities to support ESRPP through future program evaluations. Table 2 shows the anticipated activities and the year in which Guidehouse expects them to occur. As the ESRPP initiative is evolving, Guidehouse will revise this schedule each year as part of the evaluation planning process. While this plan outlines anticipated activities through CY2027, Guidehouse would expect evaluation activities to continue as long as ComEd intends to claim savings from the initiative.

Table 2. Guidehouse Schedule of Future Evaluation Activities

Evaluation Activity	2023	2024	2025	2026	2027
Expert Judgement Panel	X				X
Participating Retailer Interviews	X		X		X
Web Scraping	X	X			
Sales Data Analysis	X	X	X	X	X
MPI Assessment	X		X		X
SAG MT WG Participation	X	X	X	X	X
Impact Evaluation	X	X	X	X	X