



MEMORANDUM

To: Nick Warnecke, AIC, Seth Craigo-Snell, SCS Analytics, and Elizabeth Horne, ICC Staff
From: The Opinion Dynamics Evaluation Team
Date: October 19, 2023
Re: NTG Updates for the Retail Products Initiative – Efficient Choice Tool Channel

INTRODUCTION

The Ameren Illinois Company (AIC) Retail Products Initiative - Efficient Choice Tool (ECT) channel is an online platform for comparing and reviewing residential home appliances and consumer electronics.¹ The ECT, implemented by Enervee, helps AIC customers conduct relevant product research, providing a range of information that includes product specifications, pricing, tips for use, reviews, images, and vendor locations.

In 2022, Opinion Dynamics conducted a survey of ECT visitors and collected data to estimate gross impacts for the ECT, using a novel approach to quantifying measure quantities and associated savings in alignment with the Illinois Technical Reference Manual (IL-TRM) V10.0. Impact results for the 2022 ECT evaluation were provided in the AIC 2022 Residential Program Impact Evaluation Report.² These results, in alignment with Illinois policy, used deemed net-to-gross ratios (NTGRs) established by the Illinois Stakeholder Advisory Group (SAG) in September 2021 with best available data.

In addition, as part of the 2022 survey, Opinion Dynamics gathered information to estimate updated NTGRs for the ECT for prospective application. This memo presents the results from that analysis.

SUMMARY OF NTG RESULTS

Table 1 summarizes the results of our 2022 ECT NTG analysis.

Table 1. Summary of Estimated NTGRs by Measure

Measure	Survey Responses	ECT Influence (NTGR)
Advanced Power Strips	29	0.652
Advanced Thermostats	76	0.632
Air Purifiers	31	0.600
Clothes Washers	38	0.622
Computers*	6	0.625
Dehumidifiers	47	0.638

¹ <https://amerenillinoisefficientchoice.com/>

² <https://www.ilsag.info/wp-content/uploads/2022-AIC-Residential-Program-Annual-Impact-Evaluation-Report-FINAL-2023-04-28.pdf>

Measure	Survey Responses	ECT Influence (NTGR)
Dishwashers	19	0.624
Electric Clothes Dryers	18	0.564
Evaporative Coolers*	2	0.700
Freezers	20	0.540
Gas Clothes Dryers	11	0.577
Gas Water Heaters	42	0.663
Heat Pump Water Heaters	10	0.625
LED Lighting*	112	0.686
Pool Pumps*	1	0.500
Projectors*	1	0.600
Refrigerators	56	0.634
Room Air Conditioners	29	0.555
Sound Bars*	1	0.650
Tablets*	3	0.633
Televisions	22	0.625

* We do not recommend use of these NTGRs moving forward due to limited sample sizes (for most measures) and applicability concerns (for many measures) but present them in the interest of comprehensiveness. We do not expect that the ECT will claim savings from evaporative coolers, LED lighting, projectors, sound bars, or tablets in 2024.

Using the results presented in Table 1 plus 2022 ECT gross savings, we also calculate kWh- and therm- weighted average NTGRs that can be applied to measures delivered through the ECT for which we do not have measure-specific NTG research available. This analysis is presented in Table 2 below. Note that we omitted LED lighting measures from this analysis to better reflect the expected conditions for the ECT moving forward.

Table 2. Savings-Weighted 2022 ECT NTGR

Measure	2022 Verified Gross Savings (kWh)	ECT Influence (NTGR)	2022 Verified Gross Savings (Therms)	ECT Influence (NTGR)
Advanced Power Strips	5,723	0.652	0	0.652
Advanced Thermostats	97,147	0.632	34,235	0.632
Air Purifiers	220,699	0.600	0	0.600
Clothes Washers	34,877	0.555	1,428	0.555
Dehumidifiers	82,338	0.625	0	0.625
Dishwashers	2,773	0.638	106	0.638
Electric Clothes Dryers	24,417	0.624	0	0.624
Freezers	4,117	0.700	0	0.700
Gas Clothes Dryers	0	0.540	6	0.540
Gas Water Heaters	0	0.577	54,412	0.577
Heat Pump Water Heaters	925,724	0.663	0	0.663
Pool Pumps	2,830	0.686	0	0.686
Refrigerators	49,220	0.600	0	0.600
Room Air Conditioners	2,750	0.634	0	0.634
Total/Weighted Average	1,452,615	0.621	90,188	0.651

Note: LED lighting is omitted from the analysis to better represent expected conditions for the ECT moving forward. Computers, evaporative coolers, projectors, sound bars, tablets, and televisions are omitted as the ECT did not claim savings for these measures in 2022.

METHODS

In this section, we provide a summary of the population of AIC customers who engaged with the ECT and estimates of the number of non-incented EE products purchased by these customers during 2022.

SURVEY SAMPLING AND FIELDING

While the ECT channel does not have a tracked population of “participants” in the same way as other residential initiatives, website traffic indicates that over 40,000 unique active shoppers visited and engaged with the ECT during 2022.³ To estimate savings for the channel, the evaluation team completed a participant survey in two waves to estimate purchase rates for product categories found on the site and the proportions of those purchases that were EE and did not receive an incentive through another AIC initiative. The survey included a verification component to validate EE purchases reported by respondents. We then used implementer-tracked unique active shopper counts based on observed site traffic to scale estimated EE purchase quantities to the population of ECT users.⁴ Based on participant survey results, we estimate that AIC customers purchased over 7,800 energy-efficient products after engaging with the ECT.⁵

We fielded two waves of surveys with ECT users as part of the evaluation. The sample of likely ECT users consisted of customers who created a profile or responded to a pop-up survey on the ECT website as well as those who engaged with marketing emails during the evaluation period (i.e., used embedded links directing them to the ECT). Marketing emails included regular outreach to over 20,000 AIC customers as well as more targeted email campaigns focused on smaller groups of customers. Table 3 summarizes the Wave 1 and Wave 2 sample frames, samples, and completes from each source along with unique active shopper counts.

Table 3. 2022 ECT Channel Survey Sample and Fielding Summary

	Wave 1			Wave 2		
	Sample	Completes	% Yield	Sample	Completes	% Yield
Engaged with ECT marketing email ^a	32,582	1,585	4.9%	18,386	2,592	14.1%
Responded to ECT pop-up survey	295	10	3.4%	245	46	18.8%
Created ECT profile	630	106	16.8%	637	109	17.1%
Total	33,507	1,701	5.1%	19,268	2,747	14.3%

^a Counts shown exclude customers who also provided contact info on the ECT website.

ECT INFLUENCE (NTGR ESTIMATION)

Survey respondents were asked a series of questions to inform NTGR algorithms as outlined in the Prescriptive Rebate (With No Audit) Protocol section of Attachment A to the IL-TRM V10.0. Each respondent was asked this series of

³ Website traffic in this context refers to all observable site visitation and engagement. Unique active shoppers are defined by Enervee as ECT visitors that conducted at least one of ten specific actions on the site based on observed traffic.

⁴ User online behaviors are automatically tracked by IP address and this data is used to define the total population of active shoppers. Implementer staff define unique active shoppers as ECT visitors that conduct at least one of nine specific actions on the site.

⁵ This total count of energy-efficient purchases includes some electric-only and some gas-only measures.

questions for up to three products that they reported purchasing since engaging with the ECT. For this evaluation, we did not estimate spillover.⁶ As such, the estimated NTGR is based solely on free ridership (see Equation 2 below).

Equation 1. NTGR Calculation

$$NTGR = 1 - \textit{Free Ridership}$$

FREE RIDERSHIP

Free ridership (FR) represents the portion of customers who would have purchased products with at least the same level of efficiency in the absence of the ECT. In the same way that a typical program's monetary incentive might encourage customers to purchase an EE product, the motivating factors for the ECT include a focus on eliminating market and cognitive barriers to encourage customers to choose the most energy efficient products to meet their needs. The ECT delivers a new energy-aware choice architecture that injects actionable energy efficiency information into the shopping journey while also providing an accurate, frequently updated product catalog that increases transparency on product efficiency.

The final FR score represents the degree to which visitors who purchased EE products after receiving information from the ECT would have purchased products of at least the same level of energy efficiency in the absence of the ECT.

As prescribed in the IL-TRM V10.0, Opinion Dynamics calculated FR as the average of two distinct scores—a program influence score and a no-program score:

- **Program Influence Score.** This score is based on the importance of each of the ECT's unique components, which include information on the Enervee Score, CLEARCOST, YOUSAVE, product specifications, pricing, reviews, etc.
- **No-Program Score.** This score is based on the participant's self-reported likelihood of what the purchase might have looked like in the absence of the program. The timing of the purchase, the relative efficiency level of the purchase, and any potential change in quantity are considered separately.⁷

Figure 2 illustrates the scoring algorithm.⁸ Average scores for each of the program influence scores are shown below to provide a general idea of the influence of individual program factors. However, final program influence scores are calculated at the respondent level for each unique measure. More detail will be provided in the FR analysis spreadsheet.

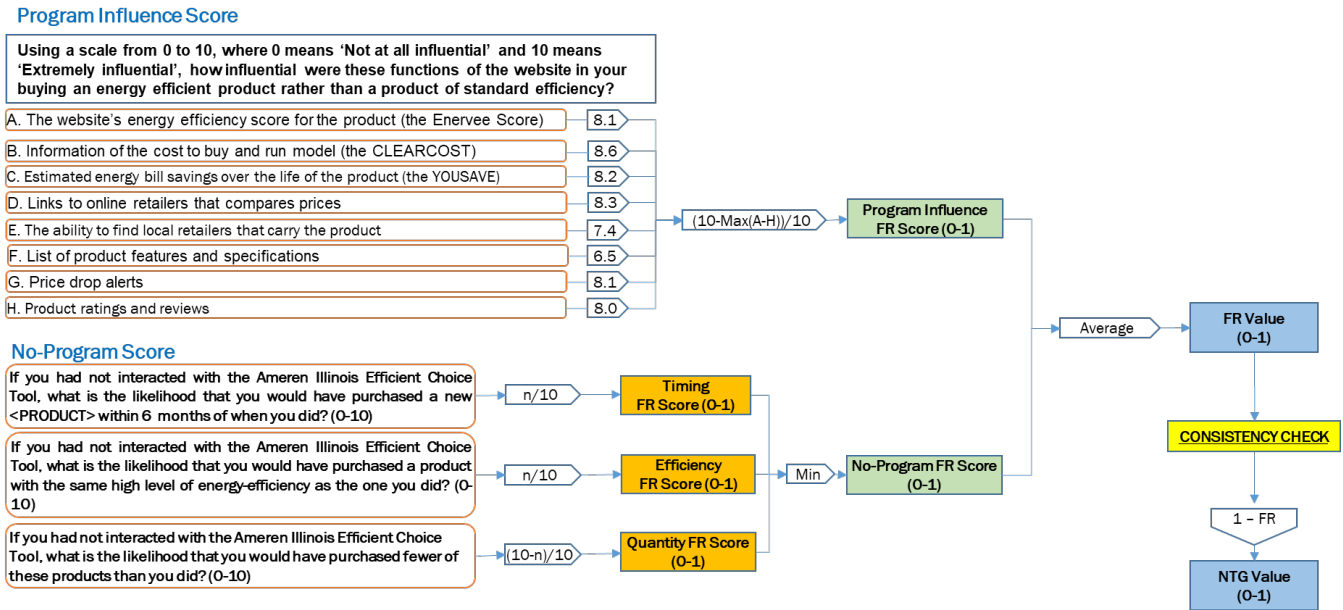
To address the possibility of conflicting responses, Opinion Dynamics also included an open-ended question asking respondents to describe in their own words the influence of the website on their decision to purchase the product(s) they did. Standard NTG evaluation practice as defined in the Illinois NTG Protocols (See Section 4.4.1.1.3 – Consistency Checks for more detail) is for the evaluator to assess open-ended follow-up questions when significant inconsistency is present between NTG responses and exclude the records from analysis when the open-ended response does not resolve the inconsistency.

⁶ The concept of spillover is complicated for the ECT. Although spillover is currently excluded from the scope of our research, we did ask standard spillover questions to monitor the issue. Responses to these questions will be used to explore the degree to which spillover may be occurring and inform a future decision as to whether it might be reasonable to include spillover in future evaluations.

⁷ The quantity component of the no-program score was only asked for lighting and power strips where purchases of multiple units is common and relevant for savings estimation.

⁸ Note that our single divergence from the IL-TRM is the removal of the rebate timing adjustment pathway from the Program Influence Score. Since rebates are not part of the ECT intervention, the timing question and adjustment are not relevant to the ECT evaluation.

Figure 1. AIC ECT NTG Scoring Algorithm Diagram



The evaluation team reviewed responses to this question for internal consistency and omitted or adjusted FR scores in cases where they were inconsistent or where the open-end provided clarity on otherwise inconsistent responses. In total, we excluded 11 cases or 5.3% of FR scores from analysis due to internal inconsistency in responses. These 11 respondents each provided program influence and no-program FR scores differing by at least 0.8 out of a possible 1.0 and provided subsequent explanations that did not support adjustment or inclusion in the analysis.⁹

⁹ The separate program influence and no-program scores are designed as independent estimates of the same overall concept (FR) and should conceptually track together.