

➤ **Evaluating ENERGY STAR Retail Products Platform**

NEEA's Approach

The ENERGY STAR® Retail Products Platform (ESRPP) is a collaborative midstream initiative of ENERGY STAR, energy efficiency program sponsors, retailer partners, and other key stakeholders, facilitated by the Northwest Energy Efficiency Alliance (NEEA). NEEA approaches the program as a portfolio of individual products, each with its own strategic intervention points within a cohesive market transformation theory. This document presents NEEA's approach to evaluating its participation in ESRPP.

NEEA has a specific mandate to deliver energy savings via regional market transformation, which requires a slightly different approach to measurement and evaluation than typical residential rebate programs. Market transformation initiatives are designed to create lasting, structural change in the market for efficient products and services. These changes can be in manufacturing processes, efficient product components, improved federal product standards, voluntary labeling, product testing, and in the options available to consumers.

Market Transformation

The characteristics of market transformation initiatives include:



Focus on long-term outcomes of market impact



A whole market perspective rather than a focus on rebated units



Designed to remove barriers and leverage opportunities in the market



Adaptive management as markets change



Sustained market change supported by changes to manufacturing processes, product certifications, and/or federal standards



Research and data to measure market progress



Using this market transformation lens to frame the evaluation of ESRPP requires a careful linkage of data and activities to observed changes in retail sales and assortment practices; in the marketing and promotion of specific products; and, ultimately, in a permanent ratcheting of the overall energy performance of specific consumer products through changes in manufacturing and federal standards. Given the number of products that can potentially be included in the portfolio and the myriad outcomes that might be observed, evaluations need to consider three levels of analysis and data collection to effectively evaluate NEEA's ESRPP program. These three levels of analysis include:

- **The platform:** the functioning and scale of the overall framework through which the program works.
- **The products:** the trends and leverage points within specific products promoted via the platform.
- **Standards and specifications:** evidence that links higher efficiency embedded in standards and specifications with the activities of ESRPP.

Step 1: Platform Level Analysis

Key Evaluation Objective: Establish link between program activities and any potential influence on retail organizations.

A stable and functioning platform is foundational to achieving many of the other outcomes sought by ESRPP. The platform allows for streamlined data exchange and supports incentive payments. It also provides a framework for engaging directly with retailers on specific product level objectives. To ensure that the platform is achieving its objectives, evaluation activities focus on confirming that the scope, scale, and function of the national program are sufficient to gain attention of national retailers and create a source of potential influence on product assortment, promotion, and, ultimately, sales.

Scale: There are several dimensions to a well-functioning and effective platform. Evaluation activities should assess the coverage of participating retailers relative to the total market in the region or territory under consideration. The portion of the total market represented by participating retailers' sales can vary by product (covered in more depth in the product analysis section below), and identifying the portion of regional/local sales flowing through ESRPP retailers can be challenging. NEEA relies on a variety of sources, including third party data vendors and primary market research to adjust estimation of the total market for a given product.

In addition, it's important to understand the scale of aggregated incentives to each retailer (aggregated by product and by participating program sponsor) as the combined budgets are likely to have a greater impact on retailer activities than would be expected from an individual sponsor's program budget.

Influence: Establishing a causal link between program communications, product selection, and incentive payments and decisions made by specific product merchants is a difficult task. Evaluators should not expect to have access to the financial and profitability criteria used by merchants or even a detailed description of retailers' approaches to assortment. However, there are indirect and qualitative sources of evidence that can be used as part of an overall program evaluation effort that provide evidence for how retailers are communicating internally about the program and help explain trends in the full category sales data. Sources include:

- Records of communication between program sponsors and the retailers.
- Records of discussion and decisions made on qualified product tiers.
- Interviews with EPA ENERGY STAR staff and the Retail Action Council.
- Interviews on internal communication about program requirements and opportunity within retail organizations.¹
- Interviews with product-specific merchants about overall market trends and how program incentives are considered within their overall assortment planning.

Step 2: Product Level Analysis

Key Evaluation Objective: Identify product specific baselines, trends in market share, and strategic leverage points that should be considered for a given product.

ESRPP provides a robust set of sales data for each product or analysts to build several key evaluation components and complete the market analyses that support large-scale shifts expected from successful market transformation interventions.

First, informed by full category sales data uploaded monthly by participating retailers, analysts can use a variety of approaches to calculate statistically discernible shifts in market share for qualified products and estimate energy savings associated with those shifts. In general, these analyses should account for expected baseline sales of qualified products, which can be calculated from historical sales data provided by retailers as well as expert assessment of the overall trends in a given product market. This combination of historical sales and market forecasts include a mix of data-driven trend lines and market forecasts informed by judgment, and should be reviewed carefully by expert planners to ensure the baseline is defensible and informed by the best sources of available data.²

¹ Currently, these interviews occur via a single contract managed by EPA. In the future, program sponsors will likely need to be more involved in the scoping, management, and resources required to complete these effectively.

² Items needing to be considered in this analysis include the addition or subtraction of retailers, the sufficiency of a 12 month pre-program sales baseline, the spikiness of retail sales patterns, and evidence of sustained change.

These two aspects, detailed sales data analyses and trends observable in market-wide analyses of an entire product category, can lead to new insights about market intervention points and energy savings opportunities. These insights should be identified and addressed in product strategy documentation developed by the program team, which outline the long-term objectives for each of the program-qualified products and describe the intervention activities likely to lead to those outcomes. ESRPP is designed to deliver mid-stream incentives to retailers, but can and should support myriad other interventions at the regulatory and supply chain level including advocacy for standards and specifications, adjustments to test procedures and allowances, and data-driven engagement with manufacturers on gaps in product lines.

Assessing the overall strategy in place for any given product involves reviewing any market analyses, strategy, and characterization documents produced for a product. These documents should include a discussion of the long-term and emerging trends in a given product, within configurations, or overall market penetration. Because some of these factors will require additional research or data sources outside the sales data provided through ESRPP, initial evaluations might focus on completing this work for program sponsors—ensuring that subsequent evaluations are informed of key progress indicators in place.

At NEEA, these product strategy documents include:

- Identification of key strategic outcomes achievable within the market for a given product, which could range from a focus on increased market share to promoting more widespread availability of specific product components (both existing and emerging technology).
- A product's regulatory history and how standards and specifications have influenced product energy use, including a discussion of any allowances for configuration or sub-category.
- Documentation of market share by key product characteristic (e.g., size, configuration and efficiency level).
- Additional data sources and analysis (e.g., incremental cost and hedonic price modeling) that inform an overall market assessment and allow for accurate interpretation of ESRPP sales data.

Step 3: Evaluation of Regulatory Progress: Standards, Specifications or Improvements to Measurement and Compliance

Key Evaluation Objective: Demonstrate linkage between participation in rule-making and specification setting and eventual requirements established. Estimate total energy savings associated with improved specification or federal standard and the portion of those savings attributable to intervention on the part of the sponsor.

Informed by the regulatory history and market characterization developed as part of the product strategy and market analyses described in Step 2, program sponsors will need to be prepared to demonstrate how they engaged with regulatory bodies on specific proceedings. Evaluation of influence on standards or specification involves evaluating sponsor engagement throughout the process. Unlike the other components of the ESRPP evaluation (which include forecasting and real-time analyses of trends in sales data), this is typically done retrospectively only after new specifications or standards have been established.

Evaluation of standard and specification changes is based on evidence collected by sponsors and provided by ENERGY STAR, the Department of Energy (DOE), and other stakeholders after the process is complete. Sources include:

- Interviews with key staff associated with the rule-making, specification process, or product testing.
- Prior and revised ENERGY STAR specifications, DOE standards, or test procedures.
- Documentation of data provided to DOE or EPA (e.g., market research, product testing and component analyses) by ESRPP or individual program sponsors that encouraged more a rigorous outcome and/or earlier adoption than would have been likely otherwise.
- All program sponsor records of communication, points of influence, and provision of information through official channels.

ESRPP is a complex data-driven program guided by an overarching theory of market transformation. Effective evaluation of the program will require activities that align with the different levels of outcome expected. This document is a concise summary of how NEEA approaches this challenge. While there are always options for how evaluation research is designed and executed, NEEA has found this approach to lead to the actionable insights and documentation of market progress so critical for a program like this.

For more information, see neea.org/RPP.



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