

5.5 Retail Initiatives

5.5.1 Overview

This program offers incentives for consumer products through retail channels. These products sell in relatively high volumes and achieve predictable savings when installed. High-efficiency products promoted through the program typically include LEDs, appliances, thermostats, and other consumer goods. The Trust provides incentives through the Retail Initiatives Program in the form of markdowns and mail-in rebates; this program supplements other Trust programs that engage the expertise of trade allies or incentivize products through markdowns at distributors.

Customer Segments

The Trust's Retail Initiatives offer incentives to multiple customer groups including residential, low-income, and commercial customers. The most recent evaluation of Trust Retail Initiatives found that 80% of customers receiving Trust incentives through typical retail channels (e.g., Home Depot, Lowe's, and Walmart) are not low-income residential customers; low-income residential customers represented 16%, and 4% were commercial customers.¹

Channels

This program leverages purchases made through retail and online stores. The rebates and markdowns offered through this channel complement the discounts offered by the Trust through Distributor Initiatives. Some measures, including LED bulbs and heat pump water heaters (HPWHs), have been successful at reaching both homeowners and contractors. For example, a homeowner may purchase an LED bulb at a retail store, and an electrician may purchase LED bulbs at a distributor.

5.5.2 Objectives

- Reduce total energy costs;
- Offer all customers, regardless of geographic location or income level, a reasonable opportunity to participate in a conservation program;
- Increase consumer awareness and use of high-efficiency products;
- Reduce peak load demand for electricity; and
- Create more favorable market conditions for the increased use of energy-efficient products and services.

¹ NMR Group, Inc. and Nexant, Inc. *Efficiency Maine Appliance Rebate Program Evaluation Overall Report*. Augusta, ME: Efficiency Maine Trust, 2014. Accessed June 8, 2018. <https://www.energymaine.com/docs/Efficiency-Maine-Appliance-Rebate-Program-Evaluation-Report-2014.pdf>

5.5.3 Market Barriers

- *Upfront cost*: The increased price of the energy-efficient option is a barrier for many customers. This program relies on in-store markdowns or mail-in rebates to overcome the price differential between conventional and high-efficiency options.
- *Short decision cycle or emergency replacement*: Many replace-on-burnout situations have a short decision cycle for replacement. Broken water heaters may be replaced even within one day of their failure. Capturing the opportunity to select an efficient option in these emergency replacements can be a challenge, especially if it requires the adoption of a new technology. Few customers are interested in thinking about their water heating systems until their current system fails. For such emergency situations, as well as for routine bulb purchases, a customer's decision is most often based primarily on price.
- *Lack of information*: Many customers are not familiar with high-efficiency choices: heat pump water heaters, for example, are still an unfamiliar technology for many Maine households and even some plumbers.
- *Diversity of choices*: The number and diversity of consumer products and inefficient product options available on the market can make it difficult for customers to pick out the efficient option. Having so many choices can be overwhelming.

5.5.4 Opportunity Analysis

The opportunity analysis for Retail Initiatives set out to determine if the current measures offered through the program would be cost-effective during the Triennial Plan IV period, if additional measures should be offered through this channel, and how sensitive market adoption of LED bulbs is to bulb price.

Methodology

The opportunity for efficiency savings through Retail Initiatives was determined by assessing the results of multiple studies and past program performance. This assessment assumed that most purchases made through the program occur because existing bulbs and appliances have reached the end of their useful lives or have otherwise failed. Since these purchasing decisions take place due to equipment failure, they are categorized as replace-on-burnout. The baseline for these measures is a less expensive and less efficient bulb or appliance that meets minimum codes and standards. If the standard practice is to purchase a less expensive and less efficient model, then there is an opportunity to incentivize the efficient bulb or appliance.

The opportunity analysis also considered retrofit measures. These measures replace standard equipment that is still operational; customers are motivated by rebates to take early action to upgrade with an efficient alternative. Retrofit measures achieve savings equal to the difference between the energy consumption of the efficient technology and energy consumption of the previously existing product. An example of a retrofit measure captured in the opportunity analysis for this program is smart thermostats.

The Trust assessed historic performance of the program, including the rate of measure adoption. This review also took into account price trends, technology updates, and changes in the market, and the technology adoption curve. For example, in assessing the size of the opportunity for efficient water heaters, the Trust considered the number of water heaters in Maine, the number of water heaters likely to fail in any one year, the number of efficient models incentivized through the program in the past, and projected changes to the water heater market and adoption of efficient measures. Heat pump water heaters are a measure that has shifted along the technology adoption curve since the last Triennial Plan period. While the technology has become somewhat more familiar to plumbers, contractors, and some homeowners since the last Triennial Plan period, it is still unfamiliar to most consumers. The Trust incentivized only 281 heat pump water heaters in FY2013, the first year the measure was offered. The following year, 2,035 heat pump water heater rebates were issued. In FY2017, more than 4,000 heat pump water heaters were incentivized, and in FY2018 the number will be above 5,000 through both retailers and distributors. As a new technology becomes more familiar, end users and plumbers become more receptive to considering it when their existing water heater needs replacement. However, the cost differential between an electric resistance water heater and a heat pump water heater is still a barrier. Program history shows that higher incentive levels lead to higher adoption rates.

The opportunity analysis for this program also considered a 2017 Trust study on LED pricing (see Appendix F). The study evaluated LED sales and customer behavior numbers at different incentive levels and product placement locations to determine free-ridership rates. The study's findings suggest a clear relationship between incentive levels and customer demand for LEDs. Sales volume increased for all products as the incentive level increased and the customer-facing price dropped. The study found that increased incentive levels also led to lower levels of free-ridership. Furthermore, special "off-the-shelf" product placement further increased sales and reduced free-ridership. The Trust is using these findings to determine free-ridership levels and to inform decisions on preferred product placement and incentives.

The Trust also examined historic program performance data, the number of sockets in Maine homes, and the socket burnout rate to estimate the number of bulbs likely to be purchased through the program during the Triennial Plan period. This examination informed the Trust's assessment of the size of the market, in particular for specialty bulbs. The opportunity described in Appendix A estimates that more specialty LEDs will be incentivized through the program than in years past.

Lighting savings will be impacted by the Department of Energy's (DOE's) implementation of the Energy Independence and Security Act (EISA) standards regulating the energy efficiency of the lighting industry. At the time of writing this plan, there is considerable uncertainty regarding the implementation of EISA. There is not yet enough information to assume that standards targeting luminous efficacy (a measure of efficiency in lumens produced per watt consumed), projected to be in place by 2020, will occur. It is uncertain whether halogen bulbs will meet this standard by 2020, but in either case, incentivizing LEDs will be cost-effective. Another possibility is that the DOE will place a mandatory minimum requirement on all general service (or traditional bulb) lamps of 45 lumens per watt; this standard would effectively ban all existing regulated incandescent and halogen light sources from the market. In this scenario, it

would no longer be cost-effective to offer incentives on LED general service lamps. The DOE rulemaking process started in the fall of 2017 to finalize standards on general service lamps and is still underway. This process is expected to be finalized by the first half of 2019; the Trust will update the Triennial Plan when that rulemaking process is complete.

For the purposes of the current plan, the Trust modeled the program opportunity without EISA 2020 enforcement (see Appendix A). This assumption of a less efficient baseline is informed by market assessments, a lack of EISA enforcement to date by the federal government, and the current availability of incandescent bulbs in Maine stores despite some earlier EISA milestones that should have eliminated their availability. Please see Appendix H for more information on EISA regulations.

For planning purposes, the Trust also modeled the changes to the opportunity if EISA is enforced (see Appendix A). Enforcement would reduce the energy savings claimed per bulb, although some cost-effective energy efficiency lighting opportunities would remain. This alternate model assumed the EISA 2020 provision would take effect in FY2021. The provision does not eliminate savings for general service, or traditional, screw-in bulbs because there will still be higher efficiency options. Even within LEDs, the luminous efficacy can vary from less than 70 lumens per watt to more than 100 lumens per watt. Once the 2020 provision takes effect, the incremental savings opportunities each year from new installations will be based on the savings that can be achieved by incentivizing purchases of higher efficiency bulbs than the revised baseline.

The Trust will carefully monitor the lighting market, how the national standards impact local markets over time, and the implications for the cost-effectiveness of lighting investments. Some markets have seen a negative outcome by eliminating LED incentives based on projected standards rather than based on products stocked in stores: inefficient products quickly gained a significant market share in these cases.

Findings

Based on the opportunity analysis, the Trust determined that it should continue to offer many of the same retail consumer products from Triennial Plan III in Triennial Plan IV, as they all remain cost-effective. These include heat pump water heaters, room air purifiers, clothes washers, smart thermostats, and LEDs. The assessment found that with the help of incentives the market for heat pump water heaters will grow compared to the last Triennial Plan period as customers and installers continue to become more familiar with the technology. Heat pump water heaters will continue to be offered through Retail Initiatives and Distributor Initiatives to reach all potential participants.

The Trust's analysis of LED instant discounts found that the energy savings potential is consistent with the energy savings of the last Triennial Plan period. The Trust's analysis did not add any new measures to this delivery channel, but will continue to monitor the market and other efficiency programs for efficient products sold through the retail channel.

For the Retail Initiatives budget under Triennial Plan IV, see Appendix A.

5.5.5 Program Design

This program leverages relationships with retailers of energy-efficient products to discount products on the shelf or distribute rebate information to customers at the point of purchase. The program relies on extensive use of MOUs with the major vendors of energy-efficient products. The Trust uses these MOUs to negotiate discounted prices for Maine customers, product placement, and availability of high-efficiency appliance models and informational materials. The Trust maintains point-of-purchase materials and verifies in-store pricing through frequent visits to all participating retailers.

Addressing Market Barriers

The Retail Initiatives Program addresses the upfront-cost market barrier in several ways. For some items, including LEDs, the program markdowns the price of the high-efficiency option to a level that brings it close to the price of the standard option. The program also provides mail-in rebates; these rebate amounts attempt to make energy-efficient products more attractive than inefficient ones.

The program addresses short decision cycles by marketing to customers in replacement situations and, perhaps more importantly, lowering the price of the high-efficiency option to compete with the baseline products. Marketing activities include targeted online digital advertising for emergency replacement search terms, education of installers and retail store personnel about high-efficiency options and rebates, and in-store information and signage. In-store information, signage, and personnel training are also the key strategies for addressing the barriers presented by lack of information and diversity of choices. Because bulb and water heater purchases are typically based on price, the Trust may set incentives to make efficient products the same or lower price than the standard products as well as work with retailers to position discounted units for high visibility.

Measures Promoted

The Trust evaluates products for inclusion in Retail Initiatives based on cost-effectiveness, demand, and availability. The program often relies on third-party standards (e.g., ENERGY STAR-certified heat pump water heaters) to establish which energy-efficient products are eligible for incentives. That said, the appliance market has seen increasing efficiency across many products, meaning that the difference in baseline products versus efficient models can be more modest than in the past; this positive market transformation has resulted in some consumer products being removed or excluded from the program. By way of example, the energy savings between an ENERGY STAR television and the baseline model is now so small that the Trust has found it better to invest in incentives for other high-efficiency products.

Incentives and Financial Considerations

Retail Initiatives incentivize the purchase of energy-efficient lighting by providing the minimum discount necessary to drive consumer action. The Trust bases incentives for appliances and other consumer products on the incremental price difference between conventional and high-efficiency models.

Incentives generally are set at a percentage of this incremental difference in order to guide customer choice to the high-efficiency model.

This program delivers financial incentives to participating Maine residents and businesses through two mechanisms:

- *Markdowns:* The Trust will enter into MOUs with retailers and manufacturers; MOUs typically specify that the Trust will reimburse stores if they sell high-efficiency products at agreed, discounted prices according to program guidelines.
- *Mail-in rebates:* For larger items, such as water heaters or appliances, consumers will make the purchase, pay full price, and then submit a rebate claim form to the Trust.

Marketing and Outreach

The purchasing decision for many energy-efficient consumer products is made at the store. In order to influence the customer to make an energy-efficient choice, the Trust focuses marketing efforts for this program on point-of-purchase materials including in-store displays, customer demonstrations, and training for store personnel. This has included working with stores on, and paying marketing fees for, promotional placements including end caps and aisle pallets; sales records demonstrate that these placements significantly impact sales volume, although only in conjunction with incentives. In-store personnel can also influence the number of energy-efficient models sold. In other cases, customers are motivated to purchase higher efficiency products based on low prices.

For situations where customers conduct research on consumer products prior to purchase, the Trust focuses its efforts on keyword marketing, website information, and education of the installer community. For example, if a Maine customer searches “broken water heater” online, they may see an ad describing water heater rebates and Trust resources. The Trust also works to educate plumbers and other contractors about heat pump water heaters and other technology to help vendors convince customers to purchase energy-efficient water heaters at the time of replacement. Because the replacement window is so short, installer familiarity with efficient options is important; if the efficient option is less expensive than the standard unit, familiarity may be less important.

Quality Assurance/Quality Control

Field representatives will visit stores to ensure that agreed upon markdown prices and discounted products match MOU terms, that point-of-purchase materials are being used properly, and that store employees are aware of the available measures. For example, the Trust will verify payments to participating retailers against MOU agreements to ensure that only program-approved LEDs are being incentivized. Retailers will be required to receive a waiver for any purchases exceeding quantity limits as described in the MOU; a Maine address is required as verification for larger purchases.

The Trust will review all rebate claims to ensure that the product and participant are eligible. In addition, contractors who want to appear on the Efficiency Maine Registered Vendor List as an installer must meet program requirements. For example, plumbers on the list are currently required to demonstrate a state plumbing license and proof of insurance, and sign a code of conduct.

The Trust will carefully monitor product pricing and incentive amounts to motivate customers and installers to purchase high-efficiency models.

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