DOCKETED

Docket Number:	17-IEPR-08
Project Title:	Barriers Study Implementation
TN #:	220748
Document Title:	First cost as the key barrier to efficiency among lower-income households
Description:	N/A
Filer:	System
Organization:	Marti Frank
Submitter Role:	Public
Submission Date:	8/14/2017 10:48:56 PM
Docketed Date:	8/15/2017

Comment Received From: Marti Frank
Submitted On: 8/14/2017
Docket Number: 17-IEPR-08

First cost as the key barrier to efficiency among lower-income households

Additional submitted attachment is included below.

Date: August 14, 2017

Submitted by: Marti Frank, Efficiency for Everyone

COMMENTS
ON
DOCKET 17-IEPR-08
"BARRIERS STUDY IMPLEMENTATION"

As a participant in the August 1st workshop panel, Plug Load Efficiency Opportunities for Low-income Households, I submit the following written comments regarding two key questions posed to the panel.

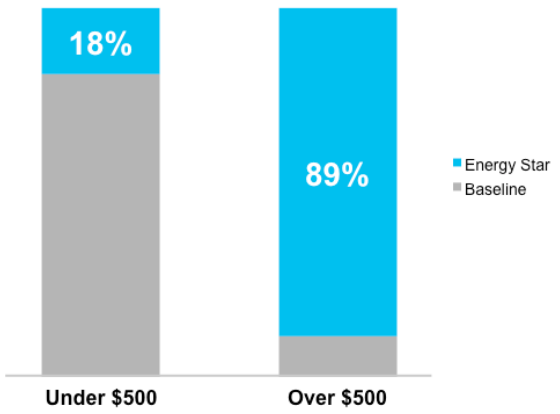
Question #1: What unique barriers exist today for plug load program participation?

*The most substantial barrier to efficiency for lower-income households is **first cost** - the amount of money a household must to pay in order to buy an energy efficient product.*

The lower your income, the less you can afford to spend. Lower income households buy the cheapest products in the store. For major appliances like refrigerators and clothes washers, that means a product priced under $500 or even under $400.

The proliferation of Energy Star appliances can be deceiving. Although a majority of clothes washers in stores today are Energy Star qualified, there are few Energy Star washers priced under $500 and none under $450. An online survey of clothes washers at a major national retailer found that only **18%** of clothes washers priced under $500 were Energy Star qualified, compared to **89%** of washers priced over $500.[1]

Lower-income households shopping for an Energy Star washer have few choices
Only 18% of models under $500 are Energy Star, compared to 89% of models over $500



[1] Online survey conducted August 14, 2017 at Sears.com. Among washers under $500, 4 of 22 were Energy Star. Among washers

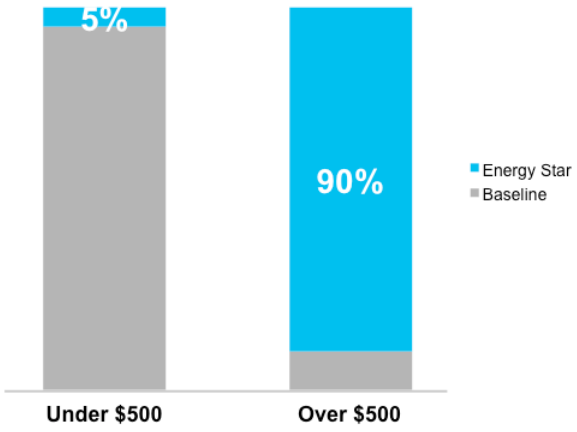
marti@efficiencyforeveryone.com
503.819.4789

Lower-income appliance buyers also **pay a larger incremental cost** for Energy Star than buyers of high-priced products. At the higher price points, there is **no incremental cost for energy efficiency**. Energy Star washers can be purchased at nearly every price point over $549.

A lower-income buyer whose limited resources require her to buy the cheapest washer available will pay a steep price for efficiency. At one national retailer, the cheapest clothes washer was priced at $299.98. A buyer would need to pay an additional $195.01, **65% more**, to step up to the retailer's least expensive Energy Star washer. Even a buyer able to spend more, say $430, would face an incremental cost for Energy Star of $64.99 or **15%.**[2]

Retail sales data show that few lower-income households – those shopping for the lowest-cost appliances, are willing to pay the high incremental cost for Energy Star. At one national retailer, over a three-month period, only **5%** of customers buying the cheapest clothes washers purchased Energy Star, compared to **90%** of customers who bought washers at every other price point.[3]

Lower-income households don't buy Energy Star washers - almost everyone else does
Only 5% of sales under $500 are Energy Star, compared to 90% of sales over $500



The data confirm that even the lowest-priced Energy Star appliances are still unaffordable for most lower-income households. Because first cost is the key barrier to efficiency, **lower-income households will continue to be shut out of the market for new, energy efficient appliances until these products are affordable for them.**

[2] Online survey conducted August 14, 2017 at Sears.com.
[3] Major national retailer sales data, analyzed by Marti Frank under NDA.

Date: August 14, 2017

Submitted by: Marti Frank, Efficiency for Everyone

Question #2: How can incentives and information programs be improved to focus on low-income barriers?

Today's plug load incentive programs can do three things to address lower-income households' first-cost barrier:

1) Focus incentives on the lowest-priced Energy Star products

2) Calibrate the incentive to cover the customer's incremental cost

3) Use a point-of-purchase mark-down to ensure the customer's Energy Star purchase is cost-neutral at the register

A recent pilot program demonstrated that these program elements result in higher sales of Energy Star appliances at the lowest price points.

The "Shift Model" a new, targeted program design that applies these principles, has been in the field in Fort Collins, Colorado since April 20, 2017, sponsored by Platte River Power Authority.

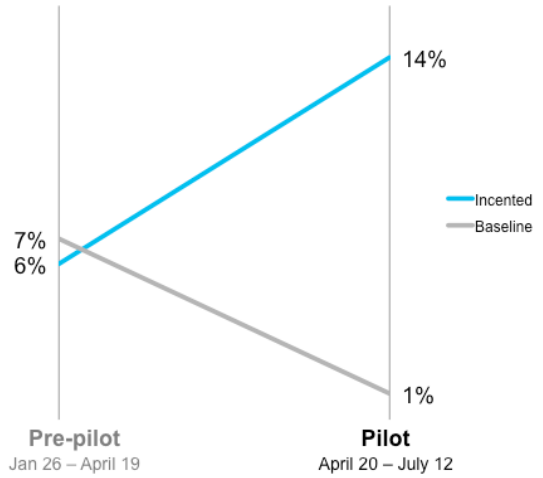
Findings from the first 12 weeks of the pilot show that **eliminating the first-cost barrier leads to a substantial increase in the sale of efficient appliances and a decrease in the sale of inefficient appliances**.

For this pilot, the retailer marked down the lowest-cost Energy Star washer to the same price as a comparable, baseline-efficient washer. During the first 12 weeks, sales of the incented Energy Star washer increased from 6% of total washer sales to **14%**, making it the best-selling clothes washer in the store. Sales of the comparable baseline-efficient washer were nearly eliminated.

This targeted program, although it is incenting only a single clothes washer model, has lifted overall Energy Star sales at the pilot store from 66% of total sales to **77%.**

Platte River Shift Model pilot shows that removing the first-cost barrier shifts customer purchases away from inefficient and towards Energy Star products

The baseline product's percent of total sales declined to near zero during the pilot period



marti@efficiencyforeveryone.com
503.819.4789

Date: August 14, 2017

Submitted by: Marti Frank, Efficiency for Everyone

The market transformation effects of the Shift Model approach at scale

As the Platte River pilot demonstrates, this approach yields substantial results when implemented at even a single store. If implemented at scale, the Shift approach will have market transformation effects, acting as *a complement to codes and standards efforts*.

Instead of waiting for efficient product features to “trickle down” to the lowest-priced products, the concerted action of efficiency sponsors will intentionally speed this process.

Several program sponsors, acting in alignment, will influence product design to increase the number and performance of low-priced, efficient products.

The increased demand for efficient products will, over multiple product cycles, reduce the price of efficient appliances.

Both of which will pave the way for new product efficiency standards at the State and National levels.

And until standards come into effect, voluntary program efforts will ensure that few, if any, baseline-efficient appliances reach the grid.

marti@efficiencyforeveryone.com
503.819.4789