



ORACLE

Artificial intelligence, real savings

Influencing action with AI and behavioral science

Paul McDonald

Senior Director, Product Strategy

Oracle Energy and Water

January 30, 2024



Welcome to the jungle

...the AI jargon jungle

A system doing work that typically needs human intelligence

Artificial Intelligence

A predictive algorithm that's been trained rather than programmed with rules

Machine Learning

A layered ML model that performs complex tasks by learning intricate patterns in data

Deep Learning

A deep learning model that generates content by predicting intent and each next bit of content to create

Generative AI

Continuous learning: the key to AI for energy management



Thanks for your response!

Want to get even more personalized tips and insights? Tell us a little more about your home and how you use energy with a quick, 5-minute survey.

START YOUR ENERGY SURVEY

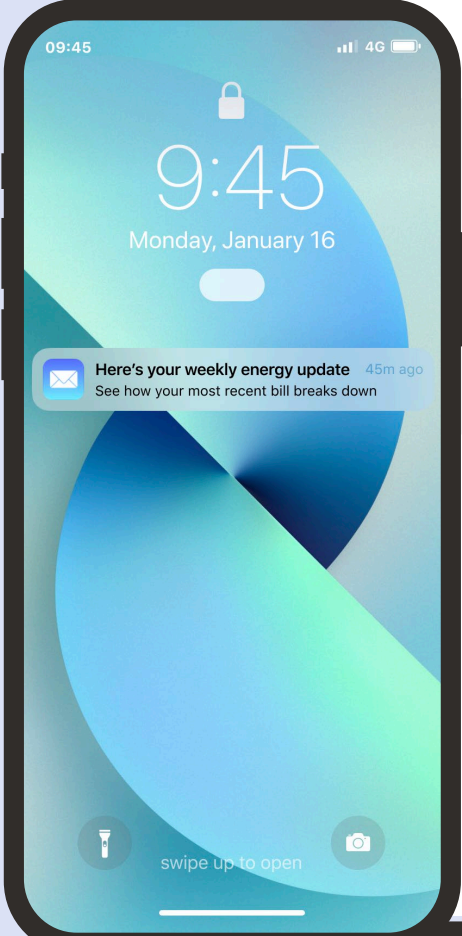
Each tap or click improves the accuracy of the model's predictions



Deep learning models now enable

up to **99%** accuracy

in appliance usage disaggregation



UtilityCo

Melia Andersen
Acct ****1234
1234 Main St.

Here's how your most recent bill breaks down

Oct 1, 2020-Nov 1, 2020

! You spent \$15.80 more on electricity compared to last bill period

This bill		\$184.23
Last bill		\$168.43

These top categories made up \$132 of your energy cost this bill

Heating	Water Heating	Laundry
\$77	\$34	\$21



[Most Recent Bill](#) | [Upcoming Bill](#)

Here's how your bill breaks down

Jun 11 - Jul 13 33 days	<p>COMPARED TO NEIGHBORS</p> <p>24 %</p> <p>more energy use compared to your efficient neighbors</p> <p>See more detail</p>
<p>▶ Electricity Usage Charges \$50.14</p> <p>▶ Gas Usage Charges \$68.37</p>	<p>WEATHER IMPACT ⓘ</p> <p>5 DAYS</p> <p>of unusually hot weather may have impacted your energy use</p> <p>See more detail</p>
<p>New Usage Charges \$118.51</p> <p><small>Usage charges do not include additional taxes, fees, non-usage charges, or true-up adjustments. Please review your bill for total amounts due.</small></p> <p>VIEW MY BILL</p>	

Let's look at a few more trends in your usage

Usage Trends | [Usage Breakdown](#)

Your top energy costs came from cooling, water heating, and electronics.

JUN 11 - JUL 13

[SEE MORE DETAIL](#)

<p>Cooling</p> <p>\$38</p>	<p>Water Heating</p> <p>\$31</p>	<p>Electronics</p> <p>\$11</p>
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▶ How do we know your breakdown?

Your Always-On Use

About 15% of your electricity costs came from always-on energy use—the small amount of power appliances and electronics draw simply because they are plugged in. [Learn more.](#)

UtilityCo

Logged in as: Alek [Logout](#) | [Account & Preferences](#) | [English \(U.S.\)](#)

[Your Energy Use](#) | [Ways to Save](#)

[ENERGY COSTS](#) | [ENERGY USE](#) | [USAGE BREAKDOWN](#) | [NEIGHBORS](#)

[ELECTRICITY](#)

Year view ▼

◀ Oct 2020 - Oct 2021 ▶



Average bill cost

\$254

Total cost for this period

\$3,297

UtilityCo

123 Energy Way, Austin, TX 12345-6789

0014837 0023-C10-1 -P14851-730905

*****AUTO**5-DIGIT 12345

SARAH CLARK
1000 SUNSHINE BLVD
APT. B
AUSTIN, TX 12345-6789



Home Energy Report: Usage Spotlight

October 3, 2021

Account #1234567890

1000 Sunshine Blvd, Apt. B

Austin, TX 12345-6789



You could be saving
more on heating and
cooling

Promotional Home Energy Report

Where you could save based on last year

Sep 19, 2020 – Sep 18, 2021

Heating and Cooling

43%

of your total energy use last year

\$358

spent last year

You were selected to receive this report because you may be using more than the regional average for this energy use category. Numbers are approximate.

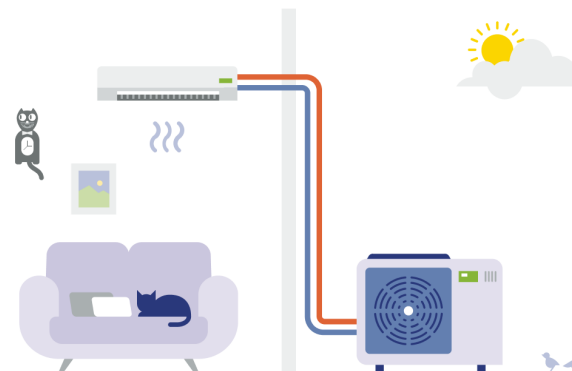
A heat pump could help you save

\$ Get up to \$4,000 on an air-source heat pump

When used year-round, heat pumps are one of the most cost-effective ways to heat and cool your home. Upgrade to an ENERGY STAR® air-source heat pump to save up to 50% on your heating costs.

If your home is electrically heated, you can also receive up to \$4,000 when you install a qualifying energy efficient air-source heat pump.

To learn more, visit
utilityco.com/heatpumprebate.



Not quite ready to invest in a heat pump? Turn over for other ways to save.



UtilityCo

Account #*****7890

Sarah,

Last year, your top 3 energy costs came from heating, cooling, and water heating



Heating was your
highest energy use this
period

Heating

43%

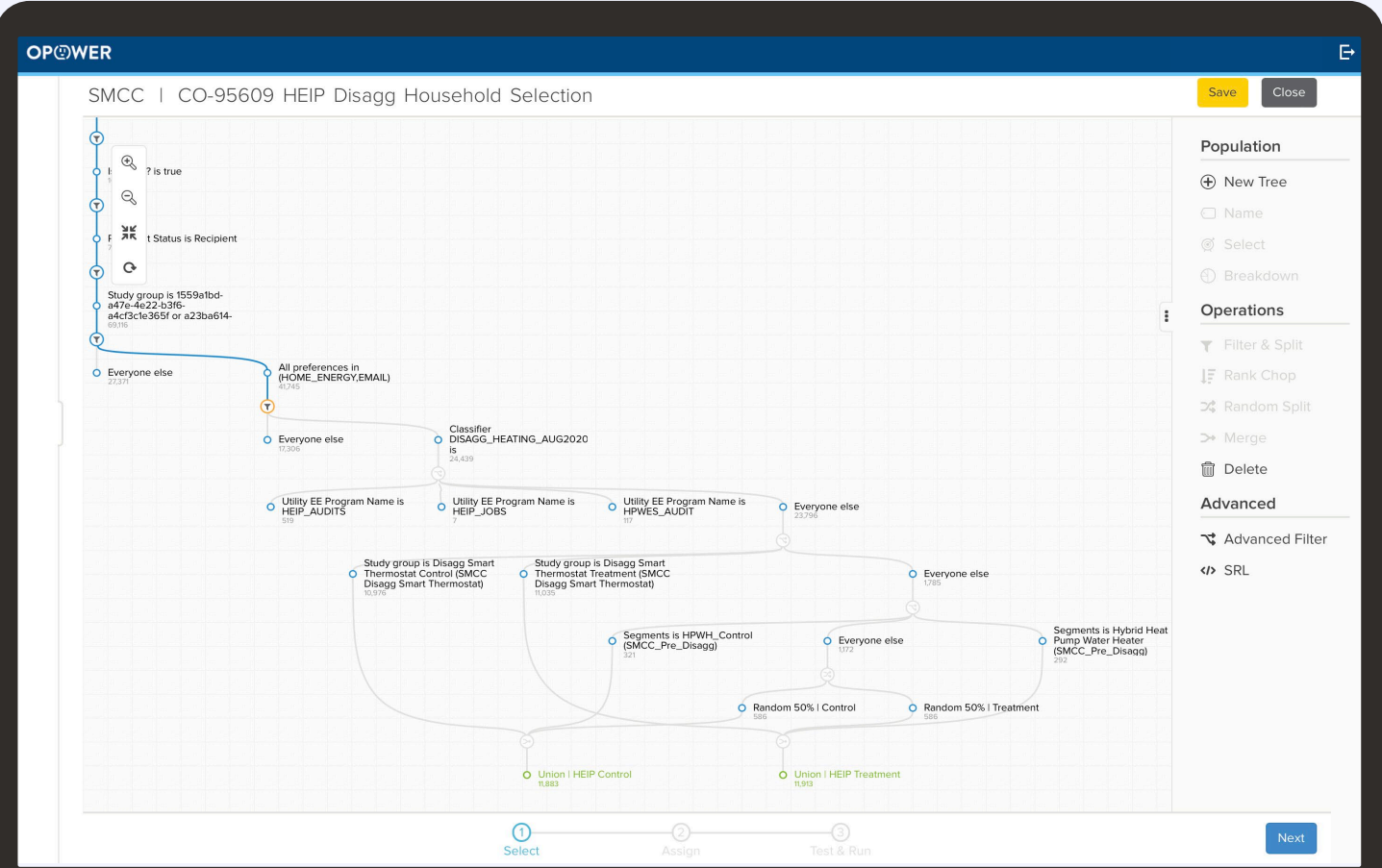
 of your total energy use

SMECO's goal: Faster program adoption

Maryland stakeholders asked SMECO to innovate: use smart meter data in new ways to accelerate demand-side management program adoption.



Opower AI identified customers with high appliance-specific usage



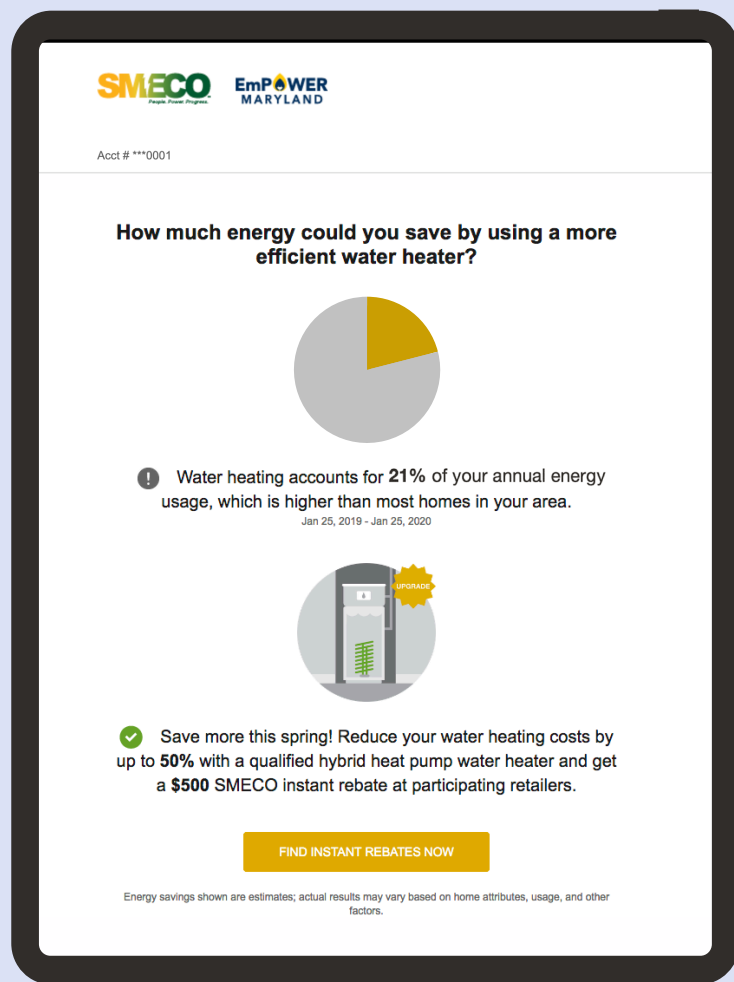
SMECO & Opower identified customers by their appliance-level energy use

Opower matched customers to SMECO program offers



SMECO delivered disaggregation-powered HERs with personalized offers

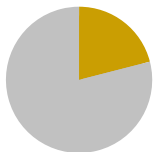
Spring Water Heating




SMECO EmPOWER MARYLAND

Acct # ***0001

How much energy could you save by using a more efficient water heater?



! Water heating accounts for **21%** of your annual energy usage, which is higher than most homes in your area.
Jan 25, 2019 - Jan 25, 2020

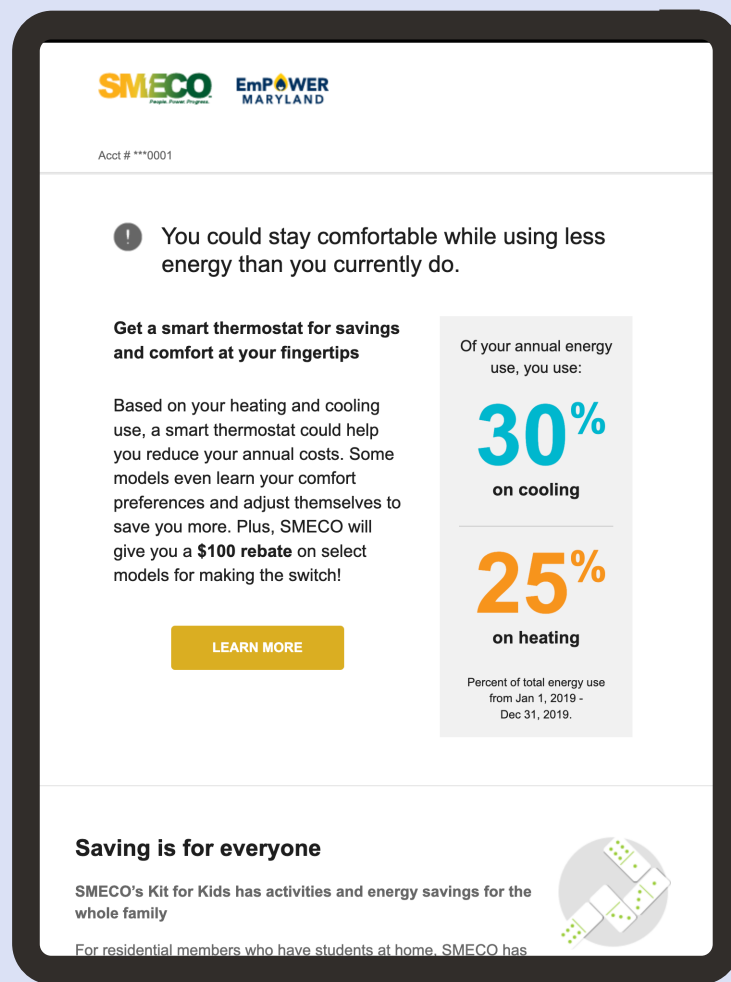


✓ Save more this spring! Reduce your water heating costs by up to **50%** with a qualified hybrid heat pump water heater and get a **\$500** SMECO instant rebate at participating retailers.

[FIND INSTANT REBATES NOW](#)

Energy savings shown are estimates; actual results may vary based on home attributes, usage, and other factors.

Summer Smart Thermostats



SMECO EmPOWER MARYLAND

Acct # ***0001

! You could stay comfortable while using less energy than you currently do.

Get a smart thermostat for savings and comfort at your fingertips

Based on your heating and cooling use, a smart thermostat could help you reduce your annual costs. Some models even learn your comfort preferences and adjust themselves to save you more. Plus, SMECO will give you a **\$100 rebate** on select models for making the switch!

[LEARN MORE](#)

Of your annual energy use, you use:

30% on cooling


25% on heating

Percent of total energy use from Jan 1, 2019 - Dec 31, 2019.

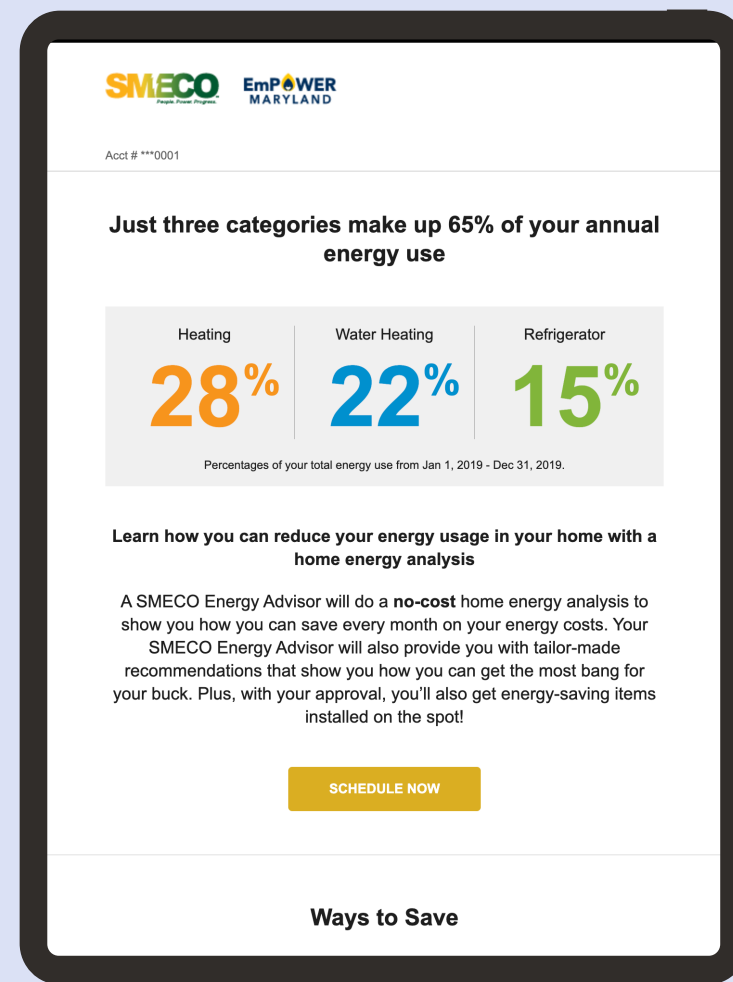
Saving is for everyone

SMECO's Kit for Kids has activities and energy savings for the whole family

For residential members who have students at home, SMECO has



Fall Home Energy Improvement Program (HEIP)



SMECO EmPOWER MARYLAND

Acct # ***0001

Just three categories make up 65% of your annual energy use

Heating	Water Heating	Refrigerator
28%	22%	15%

Percentages of your total energy use from Jan 1, 2019 - Dec 31, 2019.

Learn how you can reduce your energy usage in your home with a home energy analysis

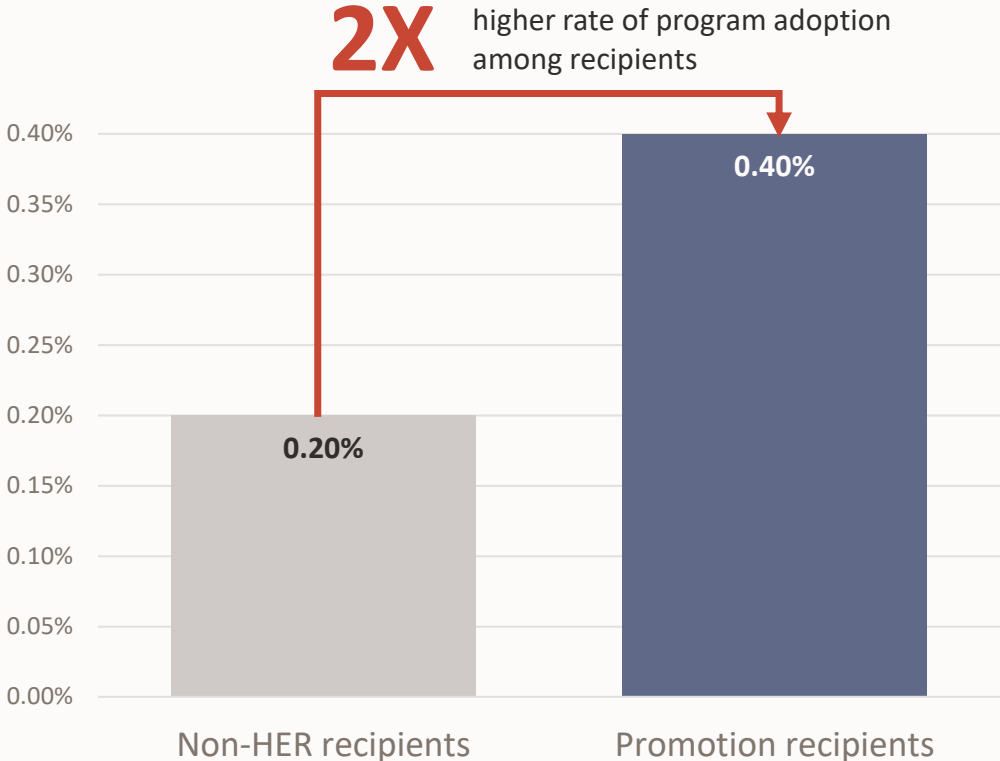
A SMECO Energy Advisor will do a **no-cost** home energy analysis to show you how you can save every month on your energy costs. Your SMECO Energy Advisor will also provide you with tailor-made recommendations that show you how you can get the most bang for your buck. Plus, with your approval, you'll also get energy-saving items installed on the spot!

[SCHEDULE NOW](#)

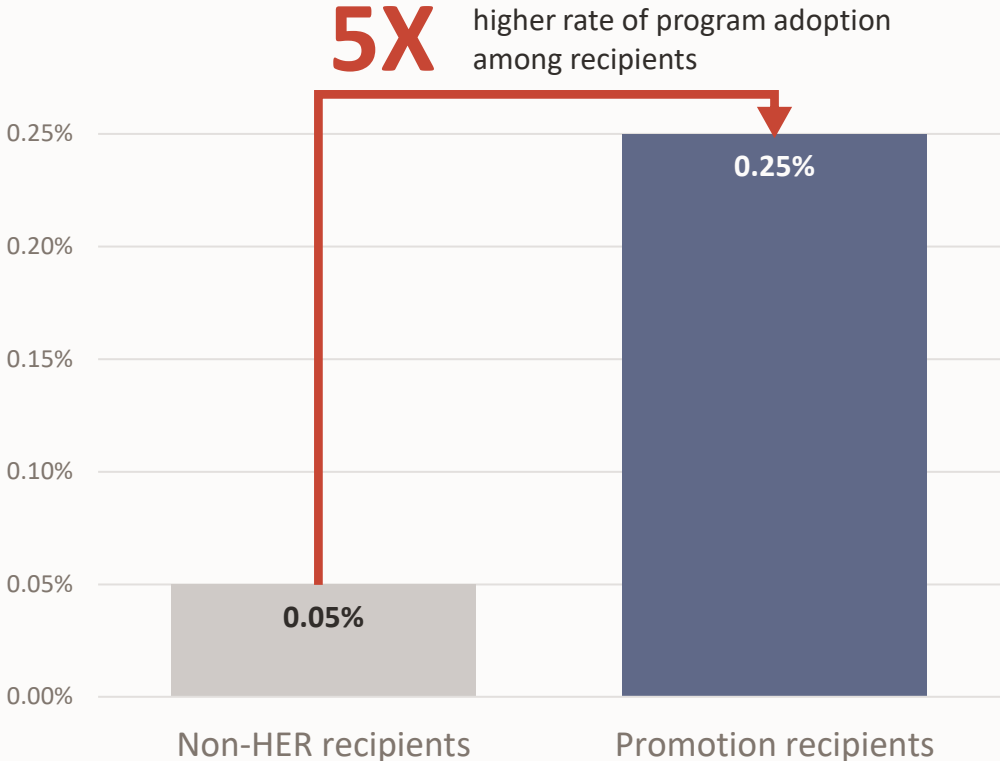
Ways to Save

SMECO achieved 2X more thermostat adoption and 5X HEIP participation

Smart thermostat adoption rates among SMECO promotion recipients vs. non-HER recipients



HEIP program adoption rates among SMECO pilot promotion recipients vs. non-HER recipients



SM/ECO

5X faster home energy improvement projects

nationalgrid

2.9X faster weatherization adoption



bgeSM

AN EXELON COMPANY

2X faster thermostat purchases



Pacific Gas and Electric Company[®]

+1,000,000 home energy checkups