

Welcome to the 2018 Fall RAD Partner Meeting!

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September 6, 2018



Agenda



- **RAD Updates**
 - RAD partner achievements
 - Recent RAD activities
- **RAD Partner Best Practices**
 - AEP Ohio: Marketing strategies
 - Baltimore Gas & Electric: Community collection events, drop-off days, and limited time offers
 - Commonwealth Edison: Customer service and marketing strategies
 - Dayton Power and Light: Partnerships with landfills and marketing strategies
 - PPL Electric Utilities: Community collection events
 - Open forum



RAD Updates

Partner Achievements



In 2018, RAD welcomed South Carolina Electric & Gas (SCE&G) as a RAD partner and we have pending agreements with two additional partners and affiliates!



Partner Achievements



In 2017, RAD partners processed **561,529** units, including:



489,097

Refrigerators



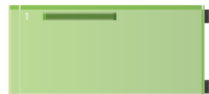
3,518

Dehumidifiers



43

RAD Partners and Affiliates



58,721

Stand-Alone Freezers



10,193

Air Conditioning Units



50

States Serviced by RAD Partners

Partner Achievements



**7.7
MILLION**

refrigerated appliances
recycled the RAD way

**33.5
MILLION**

metric tons of GHG
emissions avoided

**1,788
TONS**

of ozone depleting substance
emissions avoided

**1.06
BILLION
POUNDS
OF METAL**

**176
MILLION
POUNDS
OF PLASTIC**

**27
MILLION
POUNDS
OF GLASS**

prevented from going to landfills



Recent RAD Activities



- Spring Partner Check-in Calls
 - Calls with RAD partners in May-June 2018
 - Goal: (1) a better understanding of RAD partners' programs and (2) direct feedback on the RAD program.

Recent RAD Activities



- Spring Partner Check-in Call Outcomes
 - Insight into the diversity of RAD partner programs, and different challenges and opportunities they face
 - Partner best practices
 - Target areas for the RAD program
 - Marketing materials (posters, videos); social media posts; cumulative program benefits

Recent RAD Activities



- Events
 - NERC Conference
 - MRN Conference
 - MRN Webinar

Recycling the RAD Way!
U.S. Environmental Protection Agency's
Responsible Appliance Disposal (RAD) Program

Sally Hamlin
EPA, RAD Program Manager



EPA's Responsible Appliance Disposal (RAD) Program:

A Win-Win for You and the Environment

What is RAD?
RAD is a voluntary partnership program that works with utilities, retailers, manufacturers, states, affiliates, and others to dispose of old refrigerated appliances using the best environmental practices available—going beyond federal requirements to protect Earth's climate and ozone layer.

What are the benefits?

- Reduce energy consumption, which saves money
- Avoid the release of ozone-depleting substances (ODS) and greenhouse gases (GHGs)
- Save landfill space and energy by recycling—rather than landfilling—the metals, plastics, and glass contained in appliances
- Avoid the release of used oil, mercury, and PCBs that can cause adverse human health effects

Why join?

- ✓ RAD partners are publicly recognized by EPA for their environmental commitments
- ✓ RAD partners are distinguished as industry leaders
- ✓ EPA helps RAD partners achieve and track environmental benefits
- ✓ EPA provides partners with a variety of tools and resources related to responsible appliance disposal
- ✓ RAD provides access to a national network of like-minded organizations

What this means:

- Complying with laws on the recovery of refrigerant, used oil, and polychlorinated biphenyls (PCBs)
- Recovering appliance foam
- Promoting recycling of all durable goods
- Promoting the permanent retirement of old, inefficient appliances to save energy

RAD partners have achieved these benefits since program inception:

7 MILLION	316	1,721
REFRIGERATORS	REFRIGERATORS	REFRIGERATORS
REFRIGERATORS	REFRIGERATORS	REFRIGERATORS
REFRIGERATORS	REFRIGERATORS	REFRIGERATORS

To learn more, visit: epa.gov/rad

Recent RAD Activities



- 2017 program update
- RAD recycling handout



RECYCLING THE RAD WAY

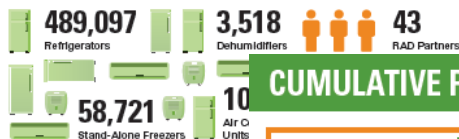
U.S. ENVIRONMENTAL PROTECTION AGENCY'S RESPONSIBLE APPLIANCE DISPOSAL (RAD) PROGRAM

2017 PROGRAM UPDATE



2017 RESULTS

In 2017, the RAD program's 42 partners collected and processed a total of 561,529 refrigerant-containing appliances from all 50 states and Puerto Rico, representing an estimated 4% of the total number disposed in the United States. This included:

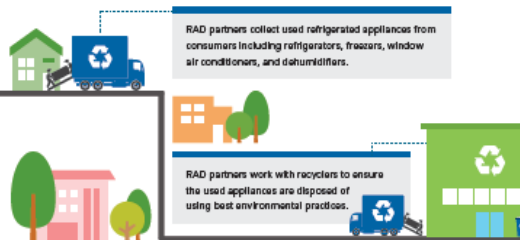


WHAT IS RAD?

RAD is a voluntary partnership program that works with utilities, retailers, manufacturers, affiliates, and others to collect used refrigerated appliances and implement best environmental practices for the disposal of these units—going beyond federal requirements to protect Earth climate and ozone layer.

As a result of their commitments, RAD partners prevent emissions that are harmful to the environment, prevent the release of hazardous substances, save landfill space through recycling, and reduce energy consumption.

HOW DOES RAD WORK?



Best environmental practices include:

- Complying with laws on the recovery of refrigerant, used oil, and polychlorinated biphenyls (PCBs)
- Retiring old, inefficient appliances to save energy
- Recovering appliance foam
- Recycling durable goods

ENVIRONMENTAL BENEFITS

Ozone Layer Protection

Avoided the release of 67 ozone depletion potential (ODP) weighted tons of refrigerants and foam-blowing agents, which otherwise would have contributed to stratospheric ozone depletion.

Durable Material Recycling

Recycled rather than landfilled the following durable materials:

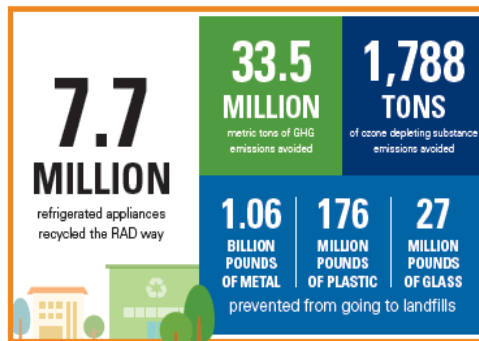
- 69 million pounds of ferrous metals (e.g., steel)
- 4 million pounds of non-ferrous metals (e.g., copper)
- 17 million pounds of plastic
- 3 million pounds of glass



Energy Savings

Reduced energy use by 1.5 billion kilowatt hours (kWh)

CUMULATIVE PROGRAM IMPACT



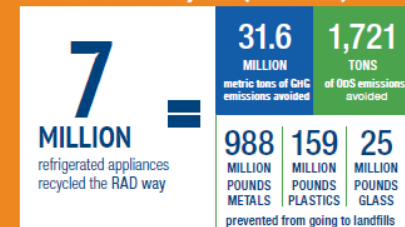
RAD Partners and Affiliates: AEP Indiana Michigan Power - AEP Ohio - Appliance Smart - Baltimore Gas & Electric (BGE) - Cape Light Compact - City of Burbank Water and Power (BWP) - City of Fort Collins Utilities - Commonwealth Edison - Consumers Energy - Dayton Power and Light (DPL) - Delaware Department of Health and Social Services (DHSS) - Delmarva Power - Efficiency Smart - Eversource - Focus on Energy - GE Appliances - Georgia Power - The Home Depot - Idaho Power - Indianapolis Power & Light Company (IPL) - Kentucky Power - Liberty Utilities - Los Angeles Department of Water and Power (LADWP) - Louisville Gas & Electric (LG&E) and Kentucky Utilities (KU) - MidAmerican Energy Company - National Grid - New York State Electric and Gas Corporation (NYSEG/Rochester Gas & Electric (RG&E) - NIPSCO - PECO Energy Company - Pepco - PNM - PPL Electric Utilities - Public Service Electric and Gas Company (PSE&G) - Puget Sound Energy - Riverside Public Utilities - Sacramento Municipal Utility District (SMUD) - Sears - Southern Maryland Electric Cooperative (SMECO) - UGI Utilities - Unifi - Vectren Energy Delivery - West Virginia Department of Environmental Protection - Xcel Energy (CO, MN, NM)

Thank you for recycling your refrigerated appliance with a proud partner of EPA's Responsible Appliance Disposal (RAD) Program.

Partners of EPA's RAD Program commit to collecting and disposing of old refrigerated appliances using best environmental practices. Recycling with a RAD partner will:

- Reduce your household energy consumption, which will save you money
- Avoid the release of ozone-depleting substances (ODS) and greenhouse gases (GHGs)
- Save landfill space and energy by recycling—rather than landfilling—the metals, plastics, and glass contained in your appliance
- Avoid the release of used oil, mercury, and polychlorinated biphenyls (PCBs) which can cause adverse human health effects

Benefits Achieved by RAD (2007-2016)



To learn more, visit: epa.gov/rad



RAD Partner Best Practices



Best Practices: Marketing Strategies

Debbie Reed, AEP Ohio



Best Practice



- AEP Ohio's Appliance Recycling Program has introduced **two** significant innovations that enable the program to pay a **higher customer incentive** and **increase customer satisfaction**, with **no budget increase** and while **reducing the total cost per unit**.
- The cost savings from these synergies were directly passed on to the customer in increased incentives.



New Marketing Direction

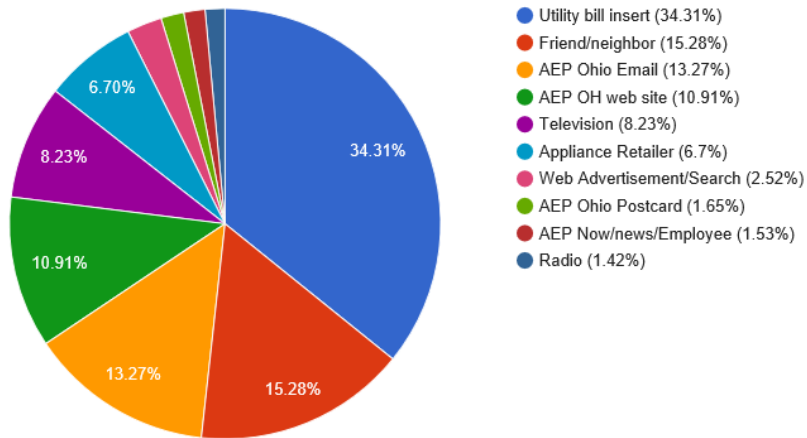
- **Eliminate high cost** marketing
 - TV and radio
- **Utilize lower cost** marketing
 - Bill inserts, email blasts, website banners, tear pad educational piece, and collaboration with other AEP Ohio EE programs
 - Life Style images branding AEP Ohio as unique
- **Coming up...**
 - Direct mailings based on customer segmentation

Best Practice



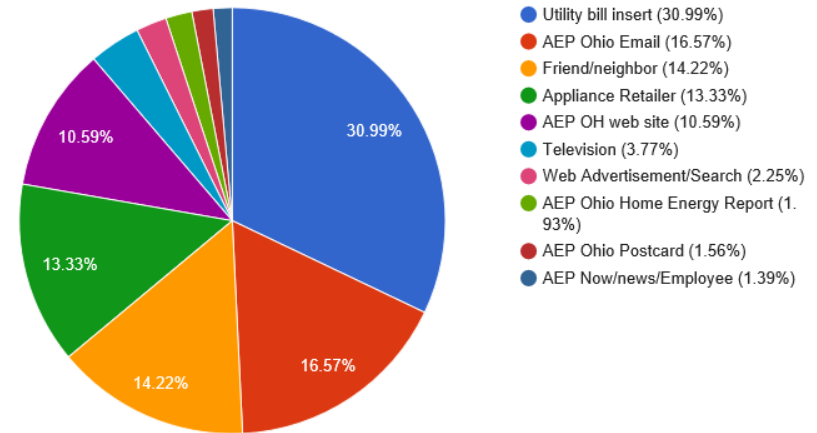
- New Marketing Campaign began 10/1/2017
- Included TV & Radio in summer 2017

- No TV & Radio in 2018



Report for the month range: 2017-01 - 2017-12

CSV [Export](#)



Report for the month range: 2018-01 - 2018-12

CSV [Export](#)

Best Practice



Appliance Recycling Banner

- One of the various banners rotated on AEPOhio.com

The screenshot displays the website's navigation bar and a promotional banner. The navigation bar includes the AEPOhio logo, a home icon, and buttons for "My Account", "Safety", "Save Energy", "News & Info", and "Contact Us". It also features "Log In" and "Register" links, a search bar, and the phone number "1-800-672-2231".

The banner, titled "Smile this Summer! We will give you \$50", promotes a recycling program. The text reads: "Smile this Summer! We will give you \$50. Get \$50 to recycle your old fridge or freezer." A blue "Learn More" button is positioned at the bottom left of the banner. The background of the banner shows three people in a professional setting, with one man pointing at a whiteboard and a woman smiling while looking at a tablet.

Best Practice



Customer Education Tear Pad

RECYCLE YOUR OLD FRIDGE. GET \$50.

Want to get rid of an old, energy-wasting fridge or freezer? Let AEP Ohio pick yours up and recycle it, and you'll be entitled to a host of benefits, including:

- \$50 incentive
- Annual energy savings of up to \$150
- Helping the earth

[See reverse for environmental benefits]

Visit AEP0hio.com/Recycle or call 866-899-9862 to schedule your quick and easy pickup today.

brought to you by:



EARTH-FRIENDLY RECYCLING

AEP Ohio uses a recycling process from Reclaim that safely disposes of hazardous chemicals, minimizes waste and environmental impact, and recovers approximately 95% of the commodity components in the appliances it recycles.

Plus, you'll get \$50 for letting us recycle your old fridge or freezer.



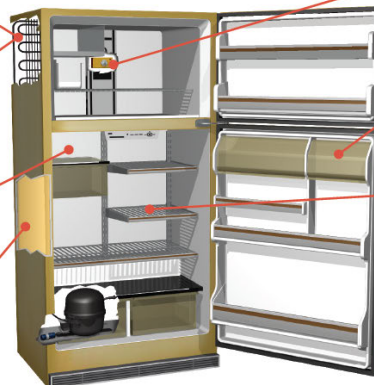
HERE'S HOW IT WORKS:

OIL is extracted with refrigerants using a specialized sealed system. It is separated, cleaned and reused in industrial equipment.

REFRIGERANT is extracted with oil. It is separated and destroyed on site in a closed-loop system using a catalytic process.

GLASS can be recycled and used as an aerator in potting soil and aggregate material in certain types of concrete.

FOAM INSULATION is shredded and pulverized into a powder. Greenhouse gases and ozone depleting substances (ODS) are captured and destroyed through a catalytic process.



MERCURY-CONTAINING DEVICES are removed and shipped to a qualified handler for proper destruction.

PLASTICS can be recycled into products such as cellphones, computer cases and other molded components.

METALS are shredded and separated by type. Steel can be recycled into products such as construction rebar, copper can be used to make electrical wire and aluminum can be used to make beverage cans.





Infusion of Income Eligible Units

- **Partnership and Best Practices** of Income Eligible and Appliance Recycling programs
- **Seamless turnkey solution**
 - Central platform for order placement, fulfillment, tracking/program data
 - Reliable, consistent service
 - Catalog of quality products at highly competitive prices.
- **Ensures appliances are properly recycled** through a solid chain-of-custody and advanced de-manufacturing process.



Best Practices: Community Collection Events, Drop-Off Days, and Limited Time Offers

Cynthia Edwards, Baltimore Gas & Electric



An Exelon Company



BGE Facts

- A subsidiary of Exelon Corporation, the nation's leading competitive energy supplier
- More than 200 years of service as the **first** gas utility in the U.S.
- Maryland's largest natural gas and electric utility
- 1.25 million electric customers, 650,000 natural gas customers in central Maryland
- 2,300 square miles - Baltimore City and all or part of 10 Central Maryland counties



BGE Recycling Program Facts

- BGE Recycling program started in 2009 – refrigerators, freezers, room AC's
- Added dehumidifiers in 2015
- Program to date has recycled over 65,500 units – Refrigerators, Freezers, RAC's and Dehumidifiers
- Year to date recycled over 9,600 units (15% of PTD)



Community Collection Events

- BGE Drop-off of RAC's and Dehumidifier's without a large appliance started in 2015
- BGE hosts 2-3 community events throughout the year
 - Drop-off events sponsored by a community group, club, sports club, etc.
 - Adequate space required for a parked truck, flow of traffic, and team to work
 - BGE supports event holder with marketing tactics to promote the event in their local newspapers, community newsletters, member emails, etc.
 - BGE does no-cost/low-cost and more cost effective marketing with emails, Facebook posts, Native Display, Gmail Ads, Google Display, and Display Retargeting
- Grass roots collaboration results in significantly reduced marketing costs compared to Utility sponsored events



Community Collection Events

- Results of BGE Spring 2018 event with a local sports club
 - Scheduled from 9AM to 1PM (4 hours), cars started lining up at 8:30!
 - 172 room A/C units and 160 dehumidifiers collected, more than 95 MWh hours saved
 - CONTINUOUS flow of traffic
 - 61% of participants indicated they heard about the event via email
- Two additional events planned for the fall of 2018



Drop Off Days

- Local facility drop-off of RAC's and Dehumidifier's without a large appliance
- Former vendor, JACO, hosted Weekly Drop-off Days at local facility, two days a week for customer drop off
- All program activity conducted during regular business hours
- Facility team set up process flow for receiving the units



Limited Time Offer (LTO) for Large Appliances

- New in 2018, BGE LTO promotion to boost overall program participation and kilowatt hour savings during slow recycling months
- Three LTO's planned for 2018
- Customers notified of LTO via marketing 2-3 weeks in advance
- Refrigerators and freezers incentives increase from \$50 to \$75 for one month



Limited Time Offer (LTO) for Large Appliances

- First LTO Results
 - Held during historically slow month for Recycling Program
 - 2,275 refrigerators, freezers, A/C units, and dehumidifiers recycled (646% increase from February 2017); 2,056 MWh hours saved
 - 2,206 appointments scheduled, (265% increase from February 2017)
 - Refrigerators (1,436), freezers (580), A/C units (146) and dehumidifiers (113)
- Second LTO completed in August, event numbers being processed, potential December event planned



Best Practices: Customer Service and Marketing Strategies

Michelle Ackmann, ComEd

Overview



- RAD partner since 2008
- Program overview:
 - \$50 incentive for recycling and old, working refrigerator or freezer since 2015
 - Units must be 10-30 cubic feet, and must be working
 - Free pick-ups



Customer Service

- Before the pick-up
 - Appointments scheduled within 14 days
 - Scheduling done online or by phone
 - Calendar link reminders are emailed to customers
- During the pick-up
 - Appointments last 5-15 minutes
 - Leave behind recycling information (e.g., what happens to your fridge once it has been picked up)
- After the pick-up
 - Incentives sent within 7 days of pick-up
 - Multiple incentive choices (i.e., check, visa, and virtual card)

Best Practice



Marketing

- ComEd manages all program marketing efforts
- Monthly bill inserts serve as a foundation year round
- Marketing targets the 35+ suburban demographic

ComEd. Energy Efficiency Program

THE POWER OF RECYCLING



- 1 OIL & REFRIGERANT** is simultaneously evacuated from the compressor and cooling circuit of each refrigerator and freezer. The oil can be used for cleaning purposes or in other industrial equipment while the refrigerant and capacitors containing PCB are properly disposed of or recycled by qualified handlers.
- 2 FOAM INSULATION** Approximately 10 pounds of foam insulation, containing ozone-depleting chemicals, is shredded under negative air pressure, and the harmful chemicals are converted to benign byproducts such as salt water.
- 3 GLASS** Approximately 5 pounds of tempered glass found in refrigerators can be used as an aerator in potting soil and as aggregate material in types of concrete.
- 4 MERCURY CONTAINING DEVICES** are found in some refrigerators and freezers. These switches and thermostats are removed and shipped to a qualified handler for proper disposal.
- 5 METALS** Each refrigerator and freezer contains approximately 125 pounds of steel and 5 pounds of copper and aluminum. The steel is recycled into products such as construction rebar to reinforce concrete, while the copper is used to make electrical wire and aluminum is used to make beverage cans.
- 6 PLASTICS** Approximately 25 pounds of plastic in each unit can be recycled into products such as cell phones, computer cases, and other molded components.



Program Achievements



- Over 400,000 units recycled since 2008
- PY10 goal is 45,000 units (refrigerators, freezers, and AC units)
 - 28,000 through July
- High customer satisfaction (97%) due to convenience and customer service in the field



Best Practices: Partnerships with Solid Waste Facilities and Marketing Strategies

Kara McMillen, Dayton Power & Light



Overview



- Dayton Power and Light
 - Electric utility in southwest Ohio
 - ~500K customers
- Appliance recycling program since 2009
 - Recycle refrigerators, freezers, room air conditioners, and dehumidifiers (\$50/\$20 rebate)
 - 30,000+ appliances collected
 - 38K MWH saved
 - \$1.3M in customer rebates
 - Vendor: Reycleim

Best Practice



Partnership with Montgomery County Solid Waste

- Appliance Amnesty Weekend
- June and October
- Reclaim truck and crew set up in collection facility
 - Customer completes enrollment form
 - Rebate mailed after event
 - Lower implementation fee plus flat labor fee



Best Practice



Marketing for events

- News release
- Social media
- Scale ticket promo
- Flyer in scale window

Unit Type	Oct 2015	June 2016	Oct 2016	June 2017	Oct 2018	June 2018
Fridge	7	17	53	73	27	72
Freezer	3	6	10	17	2	13
Room AC	0	18	33	60	5	38
Dehum.	0	0	32	71	10	38
Total	10	41	128	221	44	161

**DROP OFF YOUR OLD APPLIANCES,
PICK UP \$50**

DON'T MISS APPLIANCE AMNESTY WEEKEND

Montgomery County Solid Waste Facility
1001 Encrete Ln. | Moraine, Ohio 45439

Thurs & Fri, June 1 & 2 - 6:00 a.m. - 8:00 p.m.; Sat, June 3 - 8:00 a.m. - 3:00 p.m.

What's Appliance Amnesty Weekend? It's simple. The Montgomery County Solid Waste Facility is waiving its normal appliance drop-off charge. Instead, you can earn \$50 from DP&L for each working refrigerator or freezer you drop off and \$20 for each working room air conditioner or dehumidifier. Plus, every refrigerator or freezer you recycle can save you up to \$150 in energy costs per year. It's a win - win - win!

BE A
**SAVINGS
CHAMPION**

SAVEWITHDP&L.COM

MONTEGOMERY
SOLID WASTE
ENVIRONMENTAL SERVICES

START NOW AT DPANDL.COM/RECYCLE

DP&L

Best Practice



Hefty marketing budgets may not be necessary to drive program participation

There may be reasons other than program participation to spend money on marketing

We have not seen a correlation between marketing budgets and program participation

Best Practice

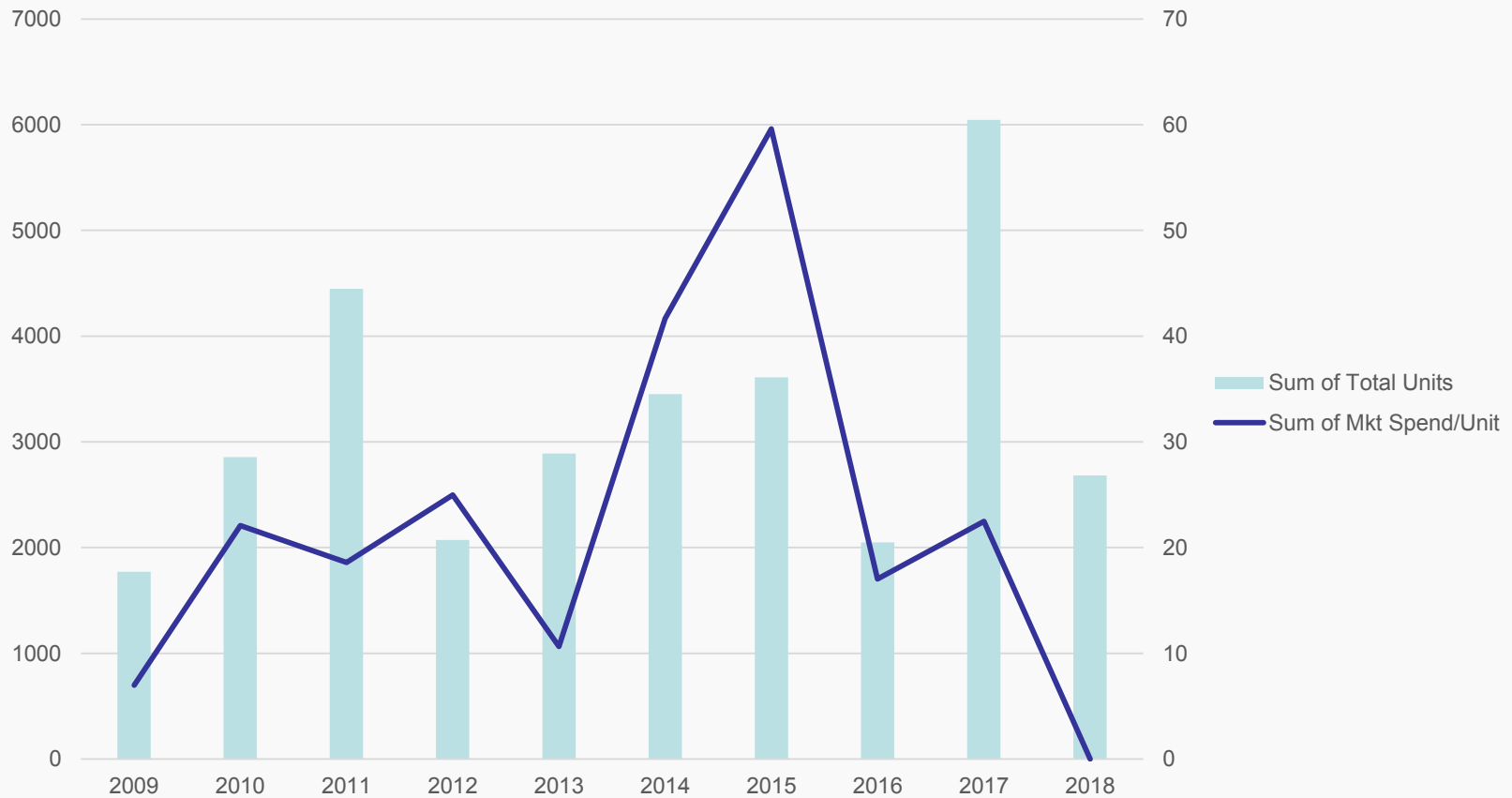


Year	Incentive	Total Units	Marketing Budget	Marketing Budget/Unit
2009	\$25	1,770	\$12,719	\$6.97
2010	\$25	2,854	\$62,000	\$22.07
2011	\$25 with two months at \$50	4,448	\$83,292	\$18.60
2012	\$25	2,071	\$51,981	\$24.98
2013	\$35	2,890	\$30,810	\$10.65
2014	\$40	3,452	\$140,343	\$41.68
2015	\$50	3,610	\$226,400	\$59.62
2016	\$50	2,049	\$29,627	\$17.02
2017	\$50	6,045	\$135,958	\$22.49
2018	\$50	2,862 YTD	\$0	\$0

Best Practice



Total Units Collected vs Marketing Spend



Best Practice



- ✓ Bill Inserts
- ✓ Print Ads

2011

Mkt
Budget
\$83K

4,450
units

- ✓ Bill Inserts
- ✓ Print Ads
- ✓ Web ads
- ✓ Social Media
- ✓ SEM
- ✓ Digital Outdoor
- ✓ TV
- ✓ Radio

2015

Mkt
Budget
\$226K

3,610
units

- ✓ No bill inserts
- ✓ No ads
- ✓ No social media

2018

Mkt
Budget
\$0

2,862
units
YTD



Best Practices: Community Collection Events

**Sam Sirkin, Recleim
on behalf of
Mary Ann Kelly-Merenda, PPL Electric Utilities**





- Small appliance “Recycling Roundup”
 - Normally, ACs and dehumidifiers cannot be recycled unless a refrigerator or freezer is scheduled for pick-up
 - During collection events, customers are invited to bring working dehumidifiers and room air conditioners to one location
 - Convenient for customers
 - Choice of a \$10 rebate check or a \$10 voucher for an on-site barbecue food truck

Best Practice



- Marketing:
 - Advertising, including social media
 - Live radio day of event: customers who did not see or hear any advertising prior to the event, heard about the event that day through the radio spots and went home to get their small appliances and come to the event.



SEP 23 PPL Recycling Round-Up
Public · Hosted by PPL Electric Utilities

★ Interested ✓ Going

🕒 Saturday, September 23, 2017 at 10 AM - 2 PM
about 10 months ago

📍 PPL's Lehigh Service Center, 827 Hausman Road, Allentown.

Show Map

Details

Come on down to the Recycling Round-Up on Saturday, Sept. 23, from 10 am to 2 pm. Bring your old working room air conditioners and/or dehumidifiers - PPL customers will receive a \$10 rebate check in the mail or a \$10 voucher for the onsite food truck, Bob-B-Que, as a bonus. We'll recycle your old appliances responsibly and you can enjoy music provided by CAT Country. We're also partnering with the Boy Scouts for a charity food drive - just bring in a can of food and receive an LED bulb in exchange (while supplies last).

Best Practice



- PPL partnered with a local Boy Scout troop on a charity food drive
 - Boy Scouts helped to direct traffic
 - Customers were encouraged to donate a can of food and in exchange receive an LED bulb
 - The Boy Scout troop, in turn, donated all of the food to a local food bank
- Corporate Citizenship is important to us – helped the troop and the local food bank



- Event Successes

- There were 88 participants for a total of 161 units collected at this event
 - Number of customers recycling more than one unit – 42
 - Most units recycled by a single customer – 6

Best Practice



Open Forum*



- Are there any questions for our presenters?
- Are there any other partners that have best practices or lessons learned they would like to share?
- Are there any other topics of partner interest?

*Reminder: please identify yourself when speaking

For More Information



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