Welcome!



To help make the meeting run smoothly:

- Please mute your microphone when not speaking;
- Use headphones if possible;
- Use the "hand raise" function or chat box to ask questions or to tell us that you'd like to comment; and
- Introduce yourself when you speak.

This meeting will be recorded.

Welcome to the 2020 Annual RAD Partner Meeting & Leadership Awards Ceremony!





October 21, 2020



Sally Hamlin RAD Program Manager

Agenda



Welcome & RAD Program Updates

- RAD Partners
- Recent RAD Activities
- Partner Achievements and 2019 Program Update

RAD Leadership Awards Ceremony

- Remarks from Office of Atmospheric Programs
 Director, Chris Grundler
- Awards Presentation

RAD Partners Presentations: Best Practices

- Consumers Energy
- PPL
- Xcel Energy
- Open Forum





RAD Program Updates

2020 RAD Partners – Utilities













































Ohio Edison • The Illuminating Company • Toledo Edison









































2020 RAD Partners – Retailers and Manufacturers





2020 RAD Partners – Waste Removal Service Providers







2020 RAD Partners – State and Local Governments









2020 RAD Affiliates







Recent RAD Activities



Responsible Appliance Disposal (RAD) Program: Guidance Document for Foam Recovery from Appliance Disposal



- 2020 Partner Check-in Calls
- Foam Guidance Document
- Website Updates: www.epa.gov/rad
- 2019 Program Update

Introduction

It is estimated that more than 13 million refrigerators/freezers, 9 million window air conditioning units, and 1.5 million dehumidifiers are disposed of annually in the United States. These appliances can have harmful impacts on the environment when taken out of service. To mitigate these impacts, federal law requires that all refrigerant is recovered prior to dismantling or disposal of these appliances, and universal waste (e.g., mercury, used oil, polychlorinated biphenyls [PCBs]) is properly managed and stored. However, federal law does not require the recovery of appliance foam blowing agents, which may contribute to ozone depletion and climate change if not appropriately managed and released into the atmosphere.

The U.S. Environmental Protection Agency's (EPA) Responsible Appliance Disposal (RAD) program was launched in October 2006 to protect the ozone layer, cut greenhouse gas emissions, and benefit communities. RAD is a voluntary partnership program between EPA and various partners involved in appliance collection and disposal, including utilities, state and local governments, retailers, manufacturers, waste removal service providers, affiliates, and others. RAD partners work with recyclers to ensure that used appliances are disposed of using best environmental practices. Recyclers use manual, semi-automated, or fully automated systems to dismantle and process units. While landfilling appliances results in the emission of 45% to 100% of the foam blowing agent, it is estimated that during manual recovery, only 15% of the foam blowing agent is emitted, and during fully automated recovery, only 5% of foam blowing agent is emitted (ICF, 2011).

This guidance document aims to provide recyclers interested in implementing best environmental practices for the disposal of refrigerated appliances with an overview of necessary qualifications, tools, and processes. This document summarizes available guidance on foam recovery from resources such as Guideline on the Manual Dismantling of Refrigerators and Air Conditioners and Emissions of Potent Greenhouse Gases from Appliance and Building Waste in Landfills (GIZ, 2017; Yesiller, et al., 2016), as well as EPA's website. This guidance document is for illustrative purposes only; the dismantling of refrigerated appliances is subject to applicable federal, state, and local environmental regulations.

2019 Program Update



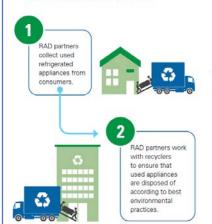
U.S. Environmental Protection Agency's Responsible Appliance Disposal (RAD) Program

2019 Program Update



The Responsible Appliance Disposal (RAD) Program is a voluntary partnership program that works with utilities, retailers, manufacturers, state and local government agencies, waste removal service providers, affiliates*, and others to collect used refrigerated appliances (e.g., refrigerators or freezers) and implement best environmental practices for the disposal of those units. RAD partners go beyond federal requirements to protect Earth's climate system and ozone layer, and, as a result of their commitments, 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?



2019 RAD Results

In 2019, RAD partners collected:



Properly disposed of:





2019 and Cumulative RAD Partner Achievements

2019 BENEFITS	CUMULATIVE BENEFITS	
44,000	809,000	
gallons of used oil	gallons of used oil	
2,000	321,000	
PCB-containing	PCD-containing	
capacitors	capacitors	
13,000	209,000	

Properly Handled Hazardous Waste

Reduced Greenhouse Gas Emissions Achieved a reduction of: CUMULATIVE BENEET 38.2 million

Ozone Laver Protection Avoided the release of:

CUMULATIVE BENEFITS 1,942 ODP ton izone depletion potential (ODP) weighted tons of Recycled Durable Materials Recycled rather than landfilled: CUMULATIVE BENEFITS 96 million lbs 1,465 million

Energy Savings Reduced energy use by: CUMULATIVE RENEETS

2.1 billion kWh 29.5 billion kWh

"Affiliates are a category for those who are supportive and advocate for the RAD program but do not process refrigerated appliances/foam themselves. For example, the Maryland Recycling Network is an affiliate.

What Do RAD Benefits Mean To Consumers?

RAD partners have processed a total of 8,932,000 units since program inception in 2007, resulting in environmental benefits equivalent to the:



by 50 million acres of U.S. forests in



Greenhouse gas emissions avoided by 13 million tons of waste recycled instead of landfilled



Carbon dioxide emissions from 4.4 million homes' energy use for



Carbon dioxide emissions from 4.9 trillion smartphones charged.

Where Is RAD Headed?

The RAD program aims to increase public awareness of the importance of responsible appliance disposal and maximize environmental benefits by welcoming new RAD partners and increasing the appliance collection rates for existing partners through consumer outreach.

RAD Partners

The RAD Program is continuously working to expand its reach and increase the number of RAD partners and affiliates. These efforts include welcoming new organization types, such as waste removal service providers and state and local governments. In 2019, the RAD program had 46 partners and affiliates across the United States

RAD Partners and Affiliates: AEP Indiana Michigan Power AEP Ohio | Baltimore Gas & Electric (BG&E) | Butler County Recycling and Solid Waste District | Cape Light Compact | City of Burbank Water and Power | Commonwealth Edison (ComEd) | Consumers Energy | Dayton Power and Light (DP&L) | Delaware Department of Health and Social Services (DHSS) | Delmarva Power | Dominion Energy South Carolina | Efficiency Smart | Eversource | Exquisite Property Services* | FirstEnergy Maryland, Ohio, and Pennsylvania | Focus on Energy | Fort Collins Utilities | GE Appliances | Georgia Power | Home Depot | Indianapolis Power and Light | JDog Junk Removal & Hauling* | Liberty Utilities | Los Angeles Department of Water & Power (LADWP) | Maryland Recycling Network* | MidAmerican Energy Company | National Grid | New Jersey Board of Public Utilities | New York State Electric and Gas Corporation (NYSEG)/Rochester Gas & Electric (RGE) | NIPSCO | PECO Energy Company | Pepco | Power New Mexico (PNM) | PPL Electric Utilities | PSEG | Puget Sound Energy | Riverside Public Utilities | Sacramento Municipal Utility District (SMUD) | Sears | Southern Maryland Electric Cooperative (SMECO) | Turlock Irrigation District* | UGI Utilities | Unitil Vectren | Xcel Energy

*Joined RAD in 2019

For more information: https://www.epa.gov/rad

RAD Program Updates



RAD partners have processed a total of **8,932,000** units since program inception in 2007, resulting in environmental benefits equivalent to the:



Carbon sequestered by **50 million** acres of U.S. forests in one year.



Carbon dioxide emissions from 4.4 million homes' energy use for one year.



Carbon dioxide emissions from 4.9 trillion smartphones charged.



Greenhouse gas
emissions avoided by
13 million tons of
waste recycled instead
of landfilled.



The 2020 RAD Leadership Awards

Remarks



Chris Grundler, Director,
 Office of Atmospheric
 Programs



The RAD Leadership Awards Program

- THUTTED STATES NON YOUR NAME OF THE PROTECTION
- Three award categories: RAD Champion, RAD Program Growth, and RAD Ambassador
- 14 awards designated
- All Partners are considered annually based upon annual reporting forms and program engagement and activities throughout the year
- Awardees will be recognized at the annual RAD Partner Meeting and throughout various EPA communications
- We are launching a brand-new Awards Webpage on the RAD website

RAD Leadership Awards Categories

- RAD Champion: The top 10 partners with the highest number of units processed with foam recovery
- RAD Program Growth: The top 3 partners to achieve the greatest percent increase in the number of units processed compared to the previous reporting year
- RAD Ambassador: The partner that demonstrates exemplary partner practices beyond the requirements of the RAD program



- RAD partners are eligible for RAD Champion recognition based on the total number of units processed with appliance foam recovery.
- 10 partners are receiving RAD Champion awards today!
- Together, these awardees have maximized their foam recovery to avoid over 250,000 MT CO2 Eq of greenhouse gas emissions by reclaiming or destroying foam blowing agents.













An Exelon Company





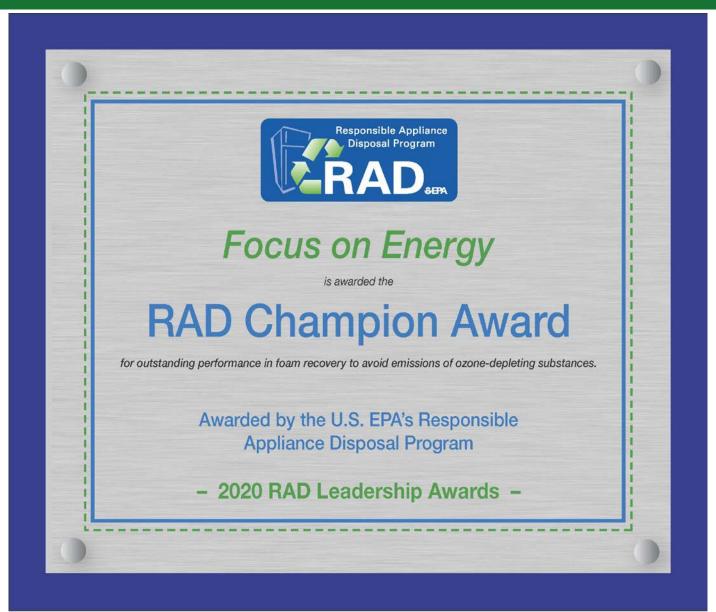












































RAD Program Growth



- This award is presented to RAD partners who have achieved the greatest percent increase in the number of units they processed in the last year.
- 3 partners will be receiving awards based on their outstanding increases in units collected compared to the 2018 program year!
- These partners increased their number of collected by more than 100%!

RAD Program Growth Winners







RAD Program Growth Winners







RAD Program Growth Winners







RAD Ambassador



- The RAD Ambassador award recognizes a partner for outstanding program engagement and exemplary partner practices including
- This year's RAD Ambassador has demonstrated a commitment to their community and environmental sustainability beyond the requirements of the RAD Program
- They've implemented a partnership with their local Habitat for Humanity and worked to optimize their collection routes
- In 2019 alone, this partner has saved over 190,000 MT CO2 Eq in greenhouse gas emissions

2020 RAD Ambassador







Congratulations!



RAD Partner Best Practices

Presenters



- Consumers Energy, Jennifer Binkley-Power
- PPL Electric Utilities, Mary Ann Kelly-Merenda and Maureen Ann Fenerty
- Xcel Energy, Bekah Schmidt

Consumers Energy Appliance Recycling Program



Agenda

- Program overview
- Program efficiencies
- Expanded reach
- Customer Satisfaction
- Marketing

Appliance Recycling Overview

- Recycling of secondary working refrigerators, freezers. Room air conditioners and dehumidifiers are also collected for recycling.
- Annual goal
 - ~30,000 refrigerator/freezer
 - Six collection trucks, teams of two
 - Consumers Energy electric territory, serving 54 counties

Program Efficiencies



- On initial launch in 2017, scheduling regions were defined by county borders
- Using participation data from 2018, we redefined the scheduling regions and categorized them on a colorcoded map. This resulted in a more focused approach and created a geographic area of 63 work teams.
- The results exceeded our expectations
 Seven-day reduction in the average number of days between scheduling and collection in 2019
 - Collected 3,000 more appliances in 2019 while driving 40,000 fewer miles.

Program Efficiencies





Expanded Reach



In 2018 we piloted an idea to help customers wanting to recycle an air conditioner or dehumidifier, without a refrigerator or freezer

 Utilizing an established relationship with Habitat for Humanity, we held three very successful "mini-collection events" in various locations across the state, in HFH parking lots.

Mini-events require customers to pre-register to drop off, allowing the program to only send the necessary manpower to the events keeping labor expenses as low as possible.

The success of these events compelled our team to make them a regular offering and we held 10 "mini-collection events" in 2019 and 5 events in 2020.

To date, the mini events have resulted in the collection of: More than 600 air conditioners and dehumidifiers Nearly 100 refrigerators and freezers

Customer Satisfaction



Audience

- Electric-only & combination customers
- Target by geography and income
 - Seasonal areas of the state, higher focus in Q2 and Q3
 - Natural fluctuations in market, Q1 historically slow
 - Program appeals to both income-qualified and market rate customers; one is driven by the convenience of the program, the other by the rebate.
- Market research indicates convenience is the highest driver of interest
- Environmental and rebate messages are second highest, and remain compelling
- Revised messaging during pandemic, to reengage customers and promote 'safe' customer participation.



Marketing Strategy

Demand generation and program awareness

- Goal to schedule ~750/week
- WOM highest reported of how customers heard about the program

Demand Generation

- Email weekly
- Direct mail monthly
- Digital (beginning in October) Collection events
- - Large and mini

Re-entering the market post-lockdown

- Safety messaging
- Curbside collection



2000

We're ready when you are with

your monthly energy cash. We'll come pick it up, recycle it and

cultiple your home. Customers with a fridge or heaper outside their

curbside pickup

Schedule your free pickup to:

. Get \$30 for each eligible rehignestor or hencer · Gat \$13 for week anighting

Recycle of Life Campaign

- Focused on benefits of recycling with Consumers Energy
- Customers report they appreciate knowing the process and feel good about their choice
- RAD logo included on all materials



Our recycling process:

- Exceeds U.S. Environmental Protection Agency Standards.
- Safely disposes of toxic, ozone-depleting substances.
- Reduces appliance landfill waste by 95 percent.

In the recycle of life, good deeds get rewarded.

Good for the planet Great for your wallet

Schedule your free pickup at ConsumersApplianceRecycling.com or call 888-990-2246 today.

Let us responsibly recycle your old energy-wasting refrigerator or freezer, and we'll pay you \$50.



ConsumersApplianceRecycling.com 888-990-2246

Consumers Energy

Count on Us®

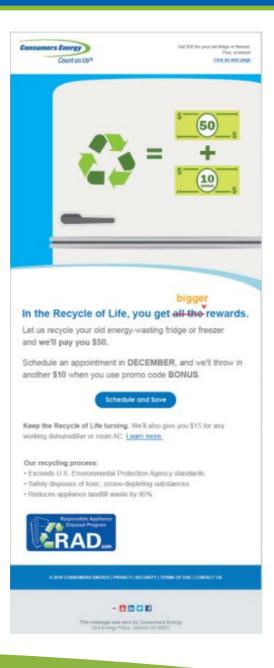


Campaign Results

- Email and direct mail utilized for the campaign
 - Campaign materials were in-market for six weeks
 - Email delivered approximately 1,500 appointments
 - Direct mail delivered an additional 500

Demand Generation opportunity

- Bonus offering an additional \$10 rebate per customer
 - Email only
 - More than 1,000 additional appointments generated in 10 days



Thank you!

Jennifer Binkley-Power Jennifer.binkleypower@cmsenergy.com



PPL Recyling Program Facts

- 1.4 million electric customers
- 10,000 square mile territory
- PPL Recycling program started in 2009
 refrigerators, freezers, room AC's
- Added dehumidifiers in 2017
- Program to date has recycled over 65,500 units –Refrigerators, Freezers, RAC's and Dehumidifiers
- Current Status

PPL Marketing

- Connect Newsletter
- Bill Inserts
- Website banners
- Billboards
- TV Campaign
- Recycling Events
- Energy Star Campaigns Flip Your Fridge
- Community Events PRIDE Festival

Residential Connect

YOU DEPEND ON US. WE DELIVER.

connect

YOU DEPEND ON US. WE DELIVER.

JULY 2019

Let's talk about: Dehumidifiers

Dehumidifiers reduce indoor humidity levels and that means a more comfortable home, but did you know it can also help to reduce allergies?

Mold, mildew and dust mites thrive in high humidity, so using a dehumidifier can help control those allergy triggers.

PPL Electric Utilities, through its energy efficiency programs, offers a \$25 rebate on new ENERGY STAR® certified dehumidifiers. Now that's nothing to sneeze at! Visit pplelectricsavings.com for more information.

If your current dehumidifier has seen better days, keep watching for information for our next dehumidifier/room air conditioner recycling event. At our most recent recycling event in Dickson City near Scranton, we collected about 400 dehumidifiers and about 600 room air conditioners.



PPL Bill Inserts

Fall for Refrigerator Recycling

RECYCLE YOUR OLD, ENERGY-WASTING REFRIGERATOR OR FREEZER



Fall hard for these *savings*.

Carve out some time to take care of your old appliances this fall.

Let PPL Electric Utilities recycle your old, energy-wasting refrigerator or freezer and get \$35 cash back on us. Upgrade to a new ENERGY STAR® refrigerator and you could save more than \$100 annually.

So grab some apple cider, give us a call and enjoy saving energy with ease.

Schedule a free pickup today by calling **1-877-486-9204** or visiting

PPL Bill Inserts

Recycle your old fridge or freezer

SO EASY, IT'S SPOOKY



Got an old, energy-wasting fridge or freezer collecting cobwebs? We'll give you \$35 to recycle it for you—plus another \$10 for each room A/C or dehumidifier you want off your hands.

Recycling your old fridge or freezer is so easy, it's spooky.

- 1. Schedule a FREE pickup.
- 2. Get a \$35 check for your fridge + \$10 more for each room A/C or dehumidifier.
- 3. Save up to \$100 a year in energy costs.

PPL Connect Newsletter

Happy haul-idays!

IT'S BETTER TO GIVE THAN RECEIVE, BUT WHY NOT DO BOTH?

It's better to give than receive, but why not do both?

Between family visits and holiday shopping, you've likely got a lot on your to-do list this season. Let PPL check something off. Upgrade to a more energy-efficient appliance, and we'll pick up your old, energy-wasting model AND give you \$35. Now that's something you won't have to check twice.

Schedule a Free pickup today by calling 1-877-486-9204 or visiting polelectric.com/recycle.



Happy haul-idays!

Nobody likes unwanted house guests. Recycle your old, energy-wasting appliances before the year is out, and PPL will give you \$35 cash back. Upgrade to a new energy-efficient refrigerator and you'll also save up to \$100 annually. It's a gift that keeps on giving.

Schedule a Free pickup today by calling 1-877-486-9204 or visiting polelectric.com/recycle.



PPL Bill Insert

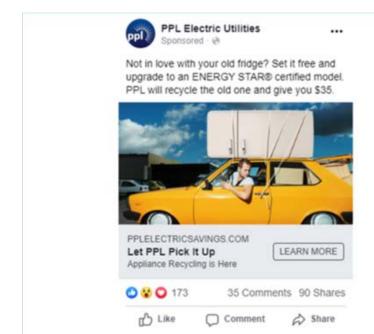


PPL Billboards



PPL Billboards





PPL Electric Utilities

model and let PPL recycle the old one.

Don't let your old fridge get too comfortable. Flip

Comment

LEARN MORE

Share

5 Comments 6 Shares

your fridge to an ENERGY STAR® certified

Sponsored @

PPLELECTRICSAVINGS.COM

Farewell, Old Fridge

Get \$35 from PPL

O O W 107

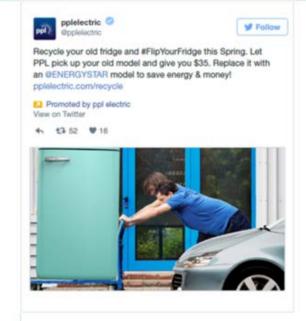
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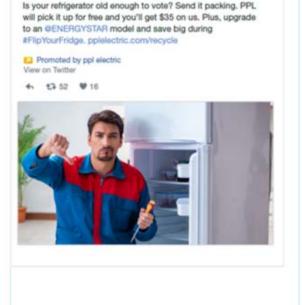






SOCIAL





> Follow

pplelectric O





Farewell, old fridge

Dealing with a retro refrigerator? Make room for something more modern. PPL makes it easy for you to dispose of your appliance—and to make money doing it. Schedule a FREE pickup of your old fridge or freezer today.

- FREE pickup
- · Get a \$35 check
- · Save up to \$100 in annual energy costs



Look for these five tell-tale signs that it is time to retire and recycle your old refrigerator:

- · Accumulation of ice
- Heat generation
- Signs of moisture
 Broken seal
- . .
- Constantly running motor

Do you also have an old room air conditioner or dehumidifier that isn't pulling its weight? Let us know when you schedule your free fridge pickup, and we'll take those too and give you an additional \$10 rebate.

Visit pplelectric.com/recycle or call 1-877-486-9204 to schedule your FREE pickup.



Feel Good About Ditching Your Fridge



Our appliance recycling partner, Recleim, uses state-of-the-art technology to safely de-manufacture and recycle your appliance—recovering approximately 95 percent of materials. Here are just some of the ways your old appliances will serve a new purpose:



After Recleim is done, less than 8 pounds of waste goes to the landfill, compared to the standard 55 pounds generated by other appliance recycling programs.

Visit pplelectric.com/recycle or call 1-877-486-9204 to schedule your FREE pickup.

PPL is a proud partner of the U.S. Environmental Protection Agency's Responsible Appliance Disposal (RAD) Program

PPL Recycling Events

- Host 2 3 Year
- Facebook Event Page
- Connect Newsletter
- Partner with local Boy Scout or Girl Scout troop on a charity food drive
 - Scouts helped to direct traffic
 - Customers encouraged to donate a can of food and in exchange receive an LED bulb pack
 - Scouts, in turn, donated all of the food to a local food bank

PPL Recyling Event - Social











Energy Star – Flip Your Fridge

• Bob Vila

• Buy New/Recycle

https://youtu.be/SEM4DP6mlz0



PPL Refrigerator Art

Pride Festival - Bradbury Sullivan - LGBQT organization

- Participated 2018, 2019, and virtually 2020
- Recycled Refrigerator Art
- Local Artists
- Crowd Choice
- Recycling Information
- Gala Exhibit



LGBT Community Center to sponsor Lehigh Valley's Pride In the Park event.

PPL is proud to support local artisans at the Artist Promenade. where we're offering a unique chance to take something mundane and make it beautiful. Show your colors by using one of our recycle-ready refrigerators as your canvas, and the crowd favorite will win the artist a \$500 gift card.

If interested, email both makelly-merenda@pplweb.com and MAFenerty@pplweb.com by July 22nd.

The first 5 respondents will be selected to have their work showcased during the Pride in the Park event. A voucher for art supplies will be provided.

Find more information about Pride in the Park at bradburysullivancenter.org/pride



































































Xcel Energy Refrigerator Recycling

By: Bekah Schmidt

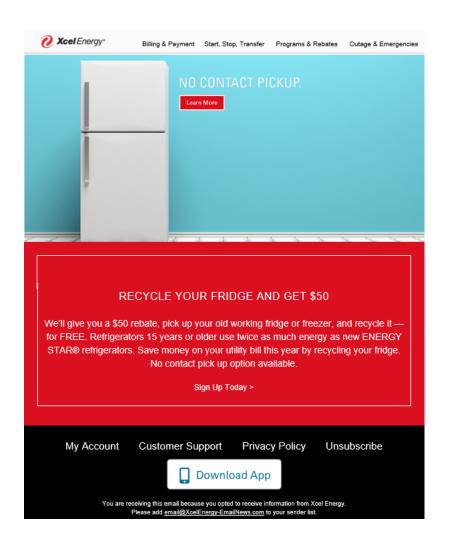


COVID -19 Response

- COVID- 19 Response (mid-March)
 - Deemed essential business under Solid/Hazardous Waste Removal
 - ARCA call center and Xcelenergy.com
 - No-Contact Pickups (release form, gloves, sanitize)
 - Positive customer feedback

Communications

- June/Sept awareness email
- Updated xcelenergy.com
- Call center
 - Emails release form
 - Informs customers of current pickup strategy
- Facebook
 - Awareness
 - Testimonials



Summer Achievements

June Awareness email (June-Sept)

- CO
- 2243 (2901) = 77% of 2019
- MN
- 2216 (2182) = +34 units
- 4,459 total units

Q4 Strategy

Halloween Email

- Social Media testimonials
 - Contact-free
 - In-home

Generate awareness and participation despite changing seasons

Resources



www.xcelenergy.com



Bekah.R.Schmidt@xcelenergy.com

Xcel Energy®



RAD Partner Discussion

Discussion Questions

- Any questions for our presenters?
- Would any other partners like to share their best practices or lessons learned?
- How can RAD support you in increasing your appliance collection rates (e.g., marketing materials, EPA presence at events)?
- Are there any other topics of partner interest?

Discussion Questions

- What have been some challenges your organization has faced in implementing your appliance recycling program?
- What innovative or novel methods has your organization adopted?
- What are ways your programs, and the RAD Program in general, can garner more consumer interest?
- What can we do to expand the RAD Program to include more Partners and different Partner types?



Thank you for joining us at the 2020 RAD Fall Partner Meeting!

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www.epa.gov/rad

