

E+Sd Energy & Store Development

September 19-21, 2022 Renaissance Orlando Orlando, FL

GreenChill Annual Recognition Event



Kersey S. Manliclic, PhD, GreenChill Program Manager
U.S. Environmental Protection Agency
September 21, 2022





15
YEARS

GreenChill Annual Recognition Event

September 21, 2022

Presentation Overview



- Remarks by Bella Maranion, Senior Advisor, Stratospheric Protection Division
- GreenChill Program Overview
- Trends and Achievements in 2021 - GreenChill Partners and GreenChill Certified Stores
- GreenChill Recognition - Presentation of Awards



Bella Maranion, Senior Advisor
Stratospheric Protection Division
Office of Atmospheric Programs



Program Overview



15 YEARS

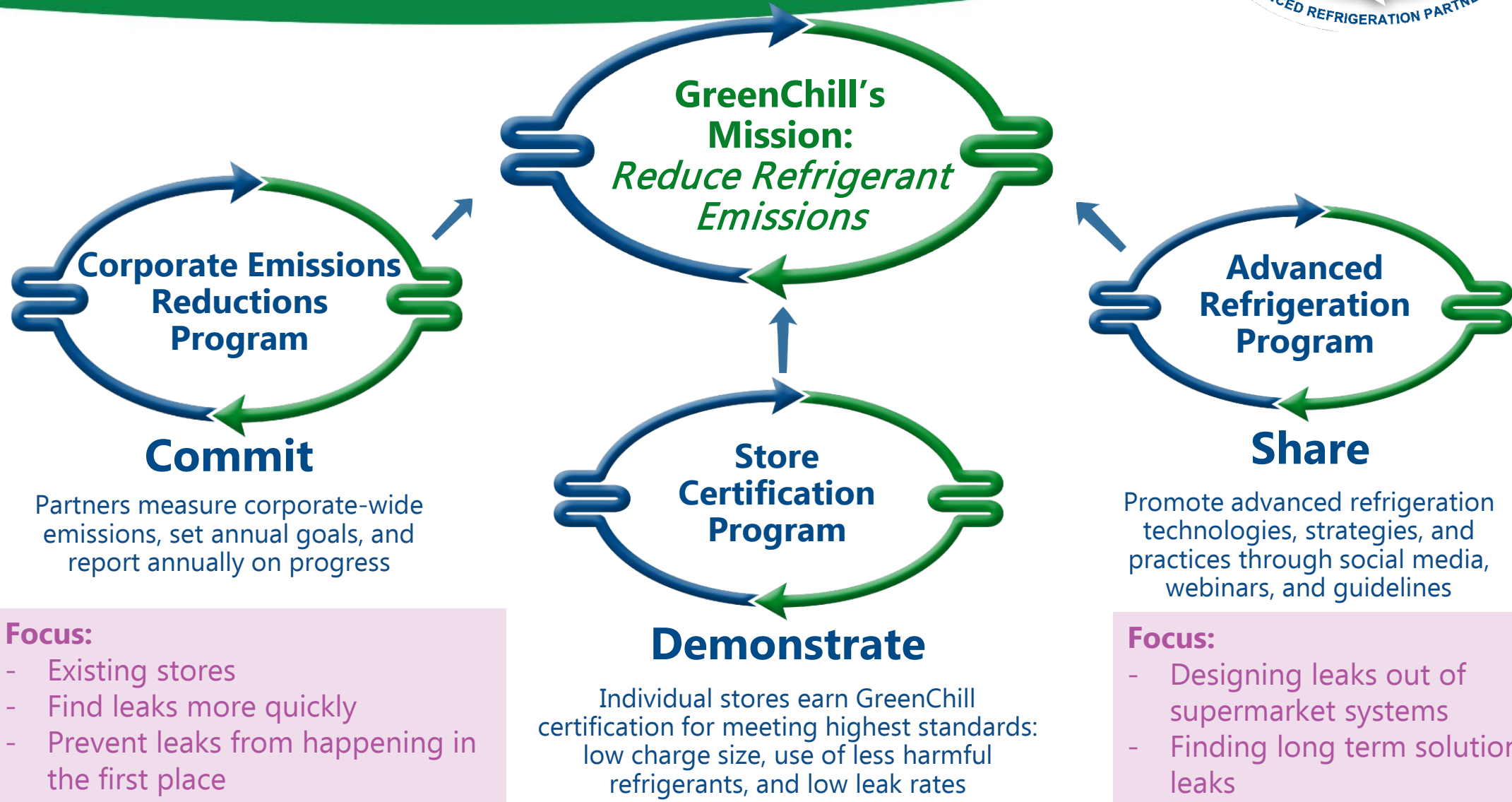


GreenChill is a voluntary partnership program that works collaboratively with the food retail industry to reduce refrigerant emission and decrease stores' impact on the ozone layer and climate system

GreenChill works to help food retailers:

- Lower refrigerant charge sizes and eliminate leaks
- Transition to environmentally friendlier refrigerants
- Adopt green refrigeration technologies and best environmental practices

GreenChill's Mission



Celebrating 15 Years of GreenChill



15 YEARS

2022 is the 15th anniversary of GreenChill

- Explore GreenChill's Partner accomplishment page
- Check out the GreenChill 15th Anniversary Report
- Thank you for helping make GreenChill a success for 15 years

www.epa.gov/greenchill

Partnership Accomplishments



Each year GreenChill Partner companies share data on the amount of refrigerant contained in their systems and the amount of refrigerant leaked from those systems. These data demonstrate that GreenChill Partners generate environmental and economic benefits by transitioning to environmentally friendlier refrigerants, reducing the amount of refrigerant used by stores, eliminating refrigerant leaks, adopting green refrigeration technologies, and implementing environmental best practices.

[Refrigerant Types](#) [Using Less Refrigerant](#) [Reducing Emissions](#) [Saving Money](#)

GreenChill

KEEPING COOL FOR FIFTEEN YEARS

2007-2022



EPA

Corporate Emissions Reduction Program



- **Food Retailers**

- Partners submit:
 - Corporate-wide data on refrigerant installed and emissions
 - Refrigerant Management Plan with goal
- Partners receive:
 - Individual benchmark report
 - Recognition for annual achievements

- **Equipment Manufacturers**

- Partners submit:
 - Data on commercial systems sold
- Partners receive:
 - Aggregate data for all systems sold by Partners

- **Chemical Producers**

GreenChill Partners	
Food Retail-Corporate	33
Equipment Manufacturers	5
Chemical Producers	6

GreenChill Partners Lead the Way



15 YEARS



Newest GreenChill Partners



Welcome to our newest Partners:

Lunds & Byerlys and **Stop & Shop** joined GreenChill since last year!



LUNDS & BYERLYS



Store Certification Program



15 YEARS

- Certified stores demonstrate leadership in food retail refrigerant management
- These stores:
 - Use only non-ozone depleting refrigerants that are Significant New Alternatives Policy program approved
 - Have lower refrigerant charge sizes and leak rates compared to the average food retail store*
- Any food retail store in the United States can apply; not necessary to be a GreenChill Partner



Platinum, Gold, and Silver certification levels



15
YEARS



Trends and Achievements in 2021

Food Retail Partners



15
YEARS

2007

**GreenChill Partners
account for 1/3 of
the supermarket
industry***

7
Partners

4,500
Stores



2021

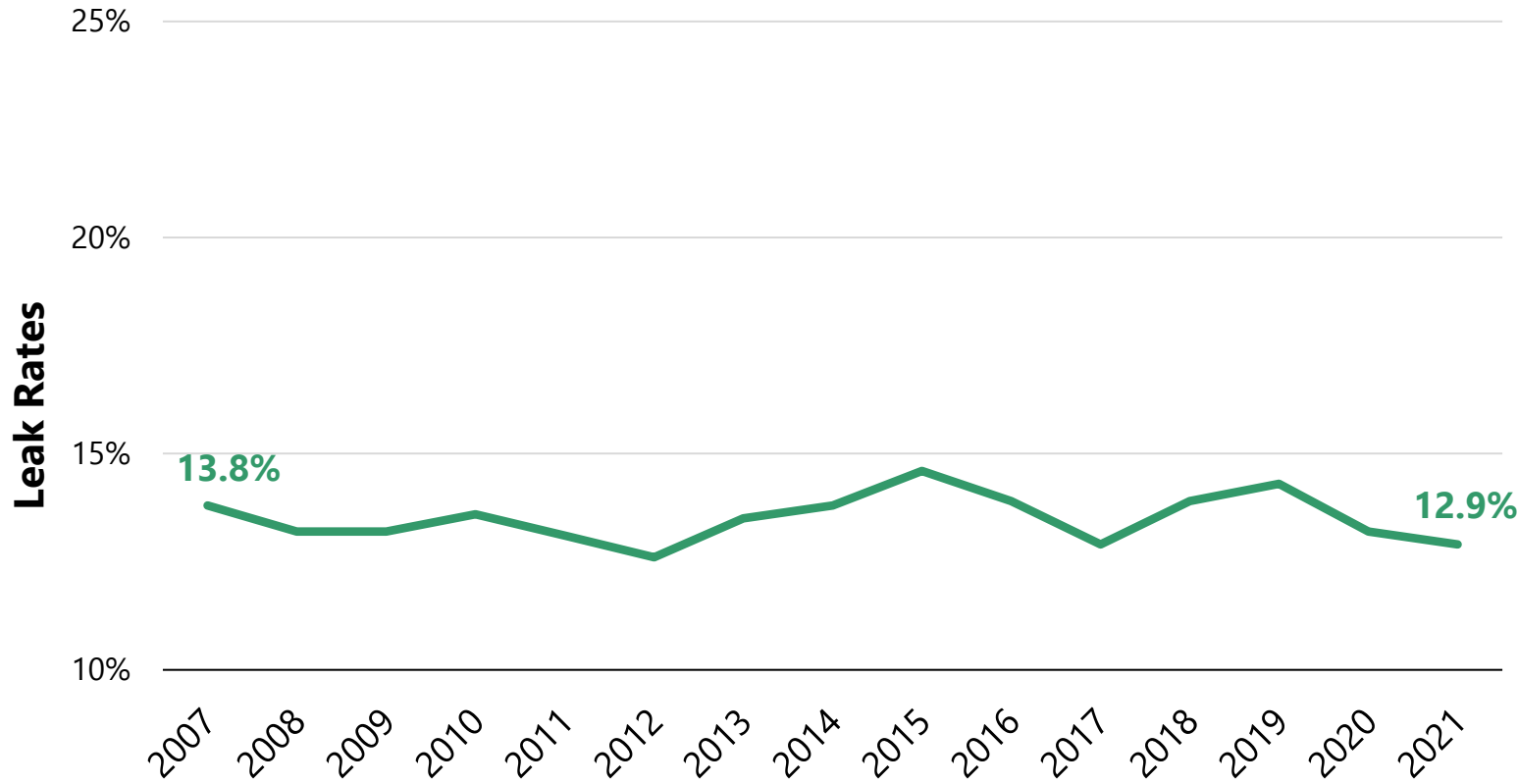
13,515
Stores

33
Partners



*Food Marketing Institute Supermarket Facts (2018).

Leak Rate – Historical

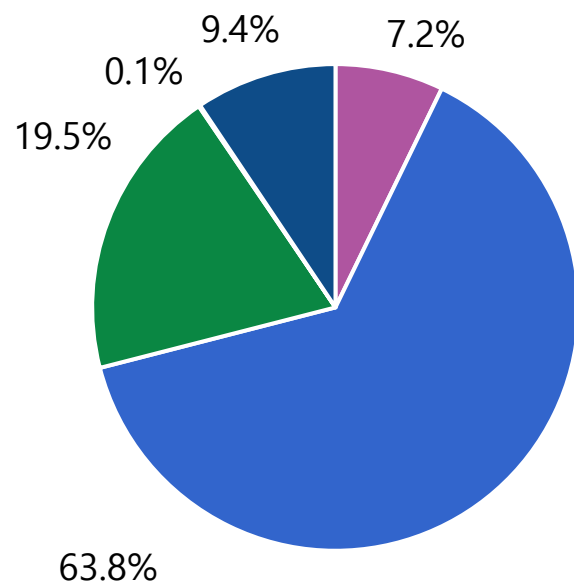


- Existing Partners continue to achieve relatively lower leak rates while adding new stores
- GreenChill has added new Partners with additional stores/equipment that are improving leak rates

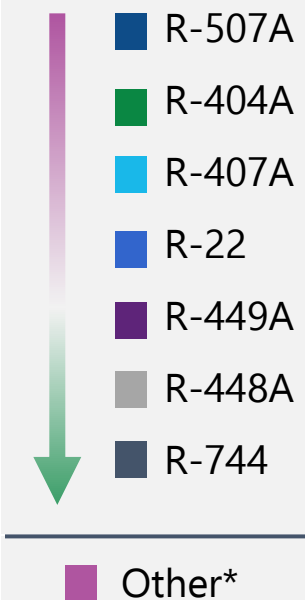
Partnership Installed Refrigerants



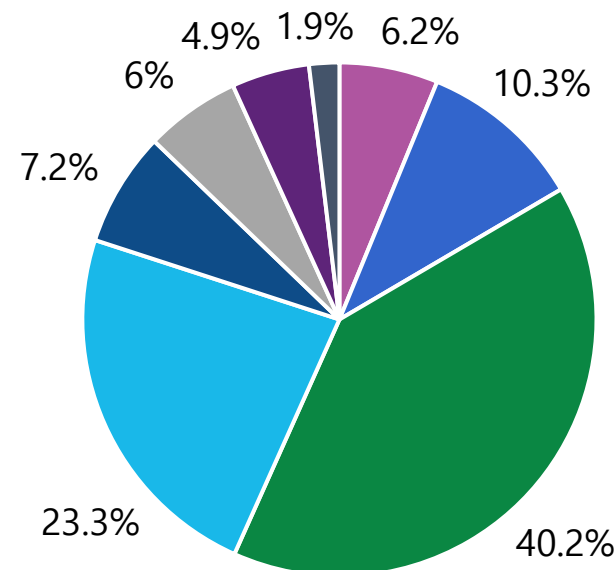
2007



Global Warming Potential (GWP)



2021

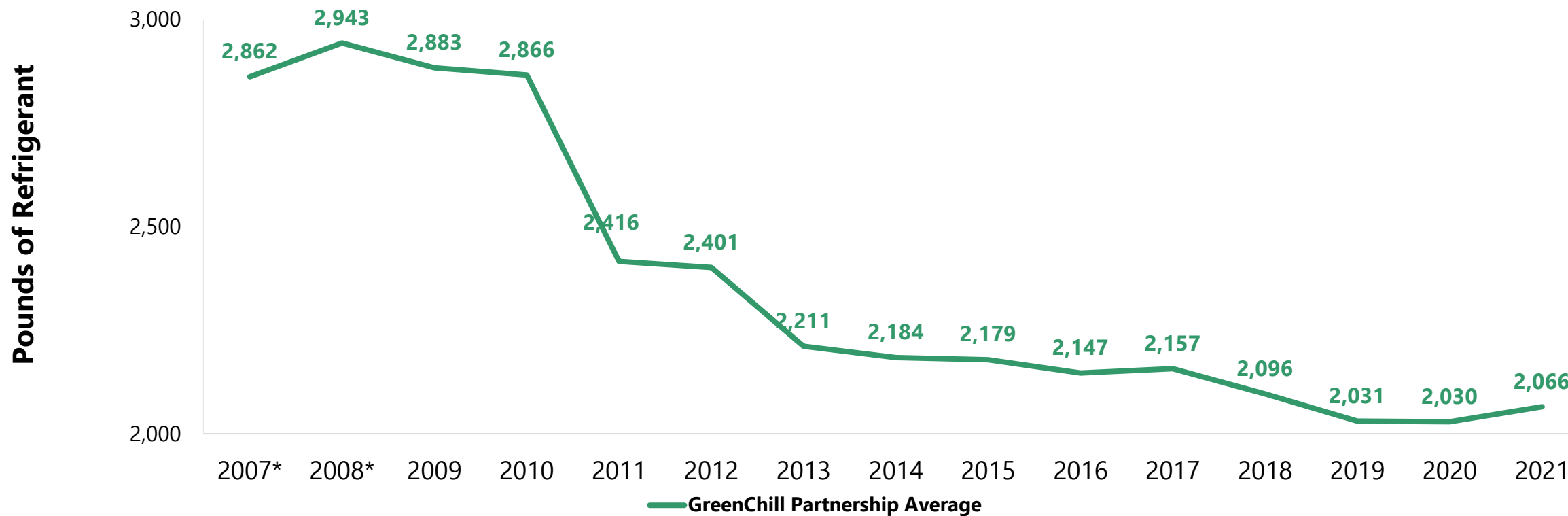


- A much broader array of refrigerants are installed today as compared to 2007
- In 2010, new production and imports of R-22 was prohibited for use in new equipment
- R-22, represents less than 10% of installed refrigerant in 2021

GreenChill Partners have done a great job on ozone layer protection. Today, we have the opportunity to do more to fight the climate crisis.

*The Top 7 refrigerants are shown. "Other" includes includes the remaining mix of refrigerants in a given year

Average Pounds of Installed Refrigerants in Commercial Systems



**Estimates for 2007 and 2008 are extrapolated based on numbers reported in 2009.*

The downward trend can be likely attributed to:

- Partners are transitioning to the use of more distributed systems and other advanced technologies which use lower refrigerant charge sizes.
- In addition, some Partners have been using more self-contained systems which use lower refrigerant charge sizes.
- Consistent with industry trends, Partner food retail stores are also trending toward smaller footprint size.

Store Certification Program



*As of July 31, 2022.

Store Certification Map



Legend

Certified GreenChill Stores

- ★ Platinum
- ◆ Gold
- Silver

Online map updated 7/13/2022

www.epa.gov/greenchill/greenchill-certified-stores



15
YEARS

GreenChill Recognition



Overview



- GreenChill is recognizing 14 companies in seven categories with a total of 63 achievements across the two Programs
- Partnership Program achievements occurred in the 2021 calendar year
- Store Certification Program achievements occurred from July 1, 2021 to June 30, 2022

Superior Goal Achievement

*Partner that achieves its annual refrigerant emissions reduction goal.
Goal must be below the leak rate achieved the year before.*



This year, nine Partners achieved their 2021 refrigerant emissions rate goals.

Exceptional Goal Achievement

*Partner that achieves its "stretch" refrigerant emissions reduction goal.
This goal is more difficult to achieve than Superior Goal Achievement.*



This year, four Partners achieved their 2021 "stretch" goal.

Most Improved Emissions Rate

Partner with the most improved emissions rate for commercial systems from the previous year.



Year-to-year

Statement from PCC



“Our co-op operates on a triple bottom line, always balancing our economic, social, and environmental impact,” said PCC Community Markets Vice President of Store Development Mark Comstock. “As the nation’s largest community-owned food market, we are deeply appreciative to the EPA for this 2021 GreenChill Achievement recognition as Most-Improved Emissions Rate for Commercial Refrigerant Systems (year-to-year). Refrigeration is energy-intensive, but the installation of CO₂ refrigerant systems in our new stores while reducing leaks in existing stores is part of how we’re optimizing our stores to align with our commitment to sustainability.”

Most Improved Emissions Rate

Partner with the most improved emissions rate for commercial systems since the year they joined the Partnership.

The logo for 'weis' is displayed in a bold, white, lowercase sans-serif font. The letters are set against a solid red rectangular background. The 'w' and 'e' are connected, and the 'i' has a distinct dot. The 's' is a simple, rounded shape.

Over Baseline Year

Best Emissions Rate

Retail Chain

Lowest refrigerant emissions rate of all Partners.



Best Emissions Rate

Small-Independent

Lowest refrigerant emissions rate of all Partners.



Store Leadership



TARGET

Vista, CA

This Target store is the first GreenChill certified store to pursue being a net-zero energy building.

Store Certification Excellence

Supermarket

The supermarket company that achieves the most GreenChill store certifications in the past year.



Store Certification Excellence

Systems Manufacturer

The commercial systems manufacturer with the most systems installed in GreenChill certified stores in the past year.

Hillphoenix[®]

A **DOVER**[™] COMPANY

Store Re-Certification Excellence (Five Years)

Each supermarket that renewed its GreenChill Store Certification for five consecutive years.

This year, 42 stores reached this achievement for five years.

Congratulations to the following Partners...



21 Stores!

- Altadena, CA
- Chino, CA
- Chula Vista, CA
- Downey, CA
- Escondido, CA
- Long Beach, CA
- Rancho Cucamonga, CA
- Santa Clarita, CA
- Santa Fe Springs, CA
- Simi Valley, CA
- Whittier, CA
- Bel Air, MD
- Amherst, NY
- Buffalo, NY
- Geneseo, NY
- Lyons, NY
- North Tonawanda, NY
- Norwich, NY
- Utica, NY
- Easton, PA
- Chester, VA

SPROUTS™

FARMERS MARKET

17 Stores!

- Los Angeles, CA
- Colorado Springs, CO
- Arvada, CO
- Yuma, AZ
- Camarillo, CA
- Green Valley, AZ
- Redlands, CA
- Sacramento, CA
- Las Vegas, NV
- Reno, NV
- Lawrenceville, GA
- Woodstock, GA
- Charlotte, NC
- Simpsonville, SC
- Nashville, TN
- Las Cruces, NM
- Ellicott City, MD



2 Stores!

- Towson, MD
- Brunswick, MD



1 Store!

- West Lafayette, IN



TARGET

1 Store!

- Minneapolis, MN

Store Re-Certification Excellence (10 Years)

Each supermarket that renewed its GreenChill Store Certification for 10 consecutive years.

SPROUTS™
FARMERS MARKET

Whittier, CA

Meeting the Coming Challenges & Looking Forward



15 YEARS

- How does GreenChill provide opportunities for Partners to lead in meeting the coming hydrofluorocarbon (HFC) phase down?
- Partners can lead the way with adopting innovative technologies to reduce their reliance on high GWP HFCs and managing HFCs where they do use them to reduce emissions. GreenChill can support these efforts by sharing Partner success stories.
- GreenChill will be setting up a working groups over the next year to refresh and re-envision many program elements and respond to Partners' suggestions (e.g., leak repair, certification levels, treatment of emissions of low-GWP alternatives).

We are looking for opportunities to expand GreenChill:

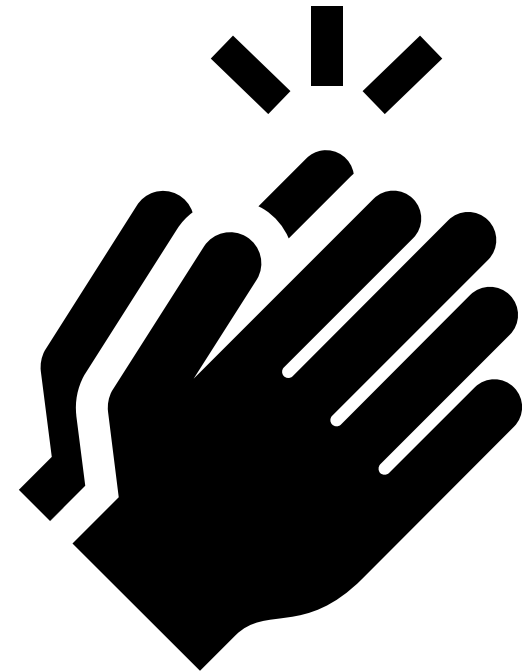
- We welcome new Partners to the Partnership and new stores to the Store Certification Program
- If interested, contact us GreenChill@epa.gov

Reducing refrigerant emissions is good for the environment and good for business!

Acknowledgments



- Congratulations to each recognition recipient!
- Thank you to our GreenChill Partners and GreenChill Certified Stores – we value and appreciate your participation in and contribution to GreenChill
- Thank you to our supporters - all play a role through data reporting, store certifications, refrigerant management plans, webinar presentations, and input on GreenChill programs and resources.



Thank you!



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www.epa.gov/greenchill

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