



Reducing Climate Change Impacts of Fluorinated Gases through Outreach and Education

New York State Pollution Prevention Institute
2/26/19

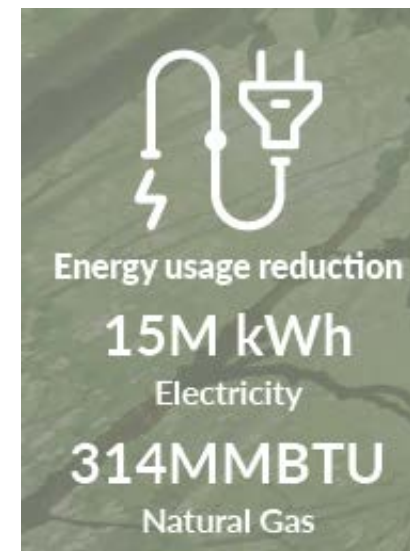
Impact Across NYS



As of September 2018

- Over **240+** companies assisted to date
- **38** R&D projects totaling **\$2.7M** funded to solve industry problems
- Over **\$1.5M** invested across nearly **100** communities in NYS

Impact



Objectives – Past and Present



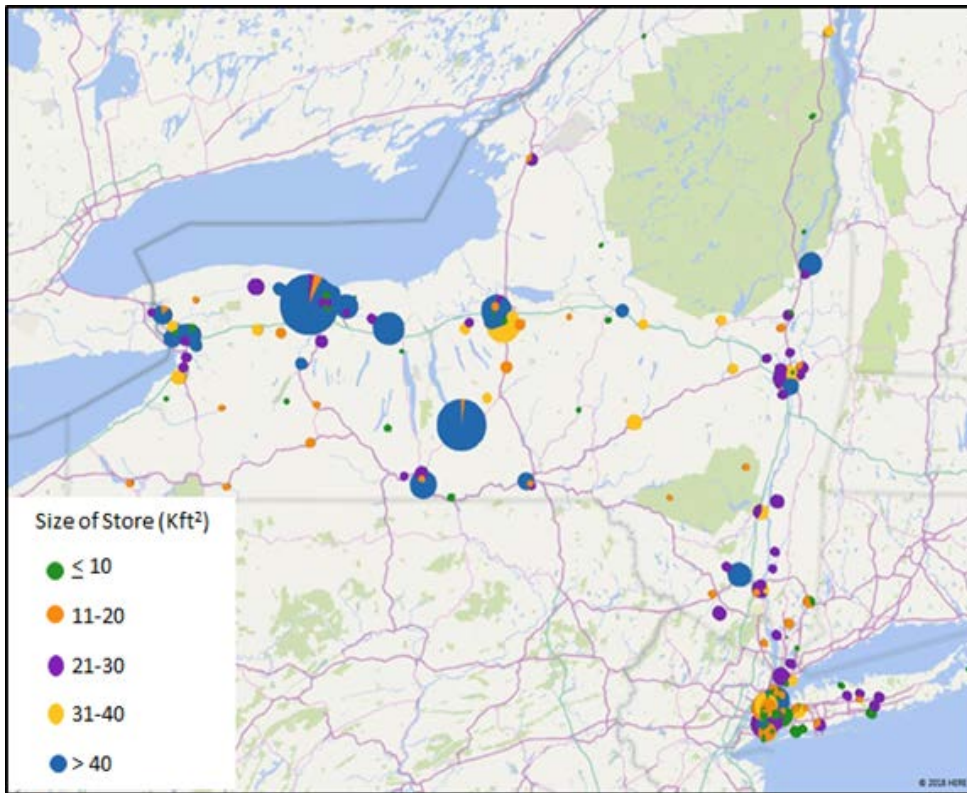
- **2017-2018**

Assess use of HFCs (fluorinated gases) in NYS supermarket, residential and municipal applications

- **2018-2019**

Work with NY Climate Smart Communities (CSC) program to educate municipalities on HFCs used in refrigeration equipment and discuss alternatives through outreach and education.

Objectives – Past - Supermarkets



Supermarkets, fish and meat markets by size in New York State.

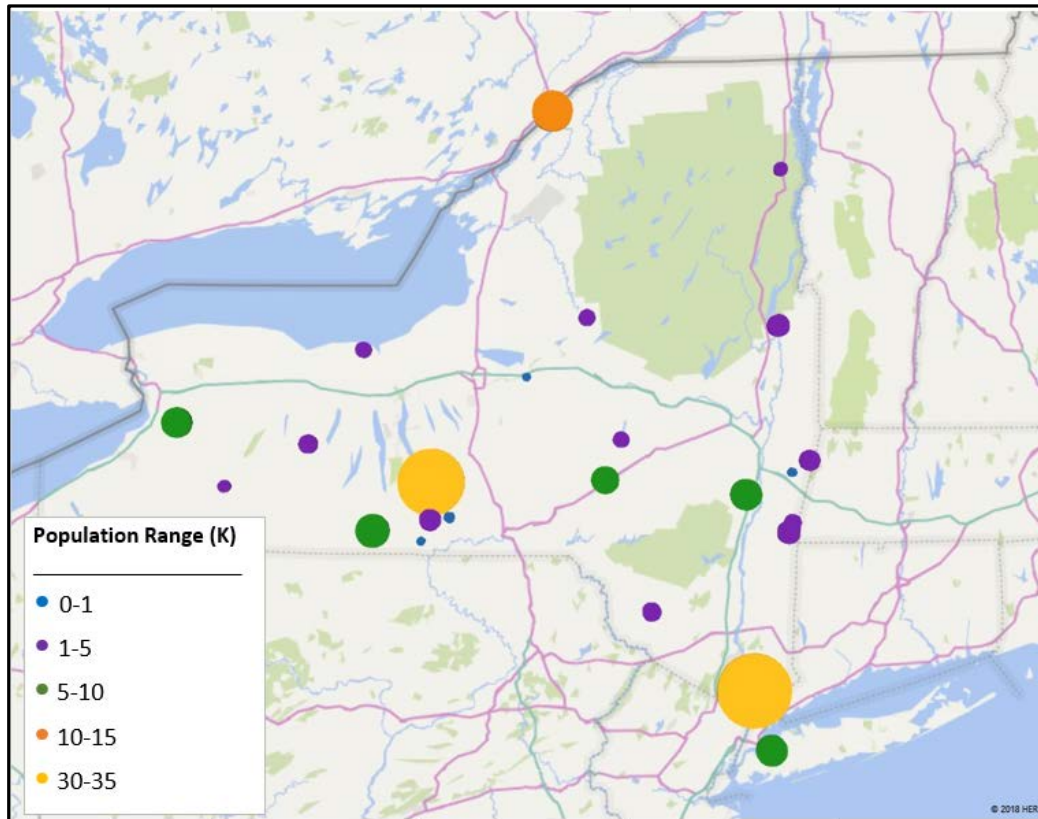
Kft² = thousand square feet. Data compiled using D&B Hoover's Database.
<http://www.hoovers.com/>

- Over 10 thousand supermarkets, meat or fish markets in NYS of which 92% are 10Kft² or smaller
- Larger stores much more aware of the climate change impacts of refrigerants than smaller stores
- Larger stores taking action to mitigate when feasible
- Barriers to adopting more environmentally friendly refrigerants are primarily financial
- Not willing to share data
 - **Safeway** \$600K fine in 2013 for leaking R-22 (HCFC)
 - **Costco** \$335K fine in 2014 for leaking R-22 (HCFC)
 - **Trader Joe's** \$500K fine in 2016 for leaking R-22 (HCFC)

Objectives - Municipalities

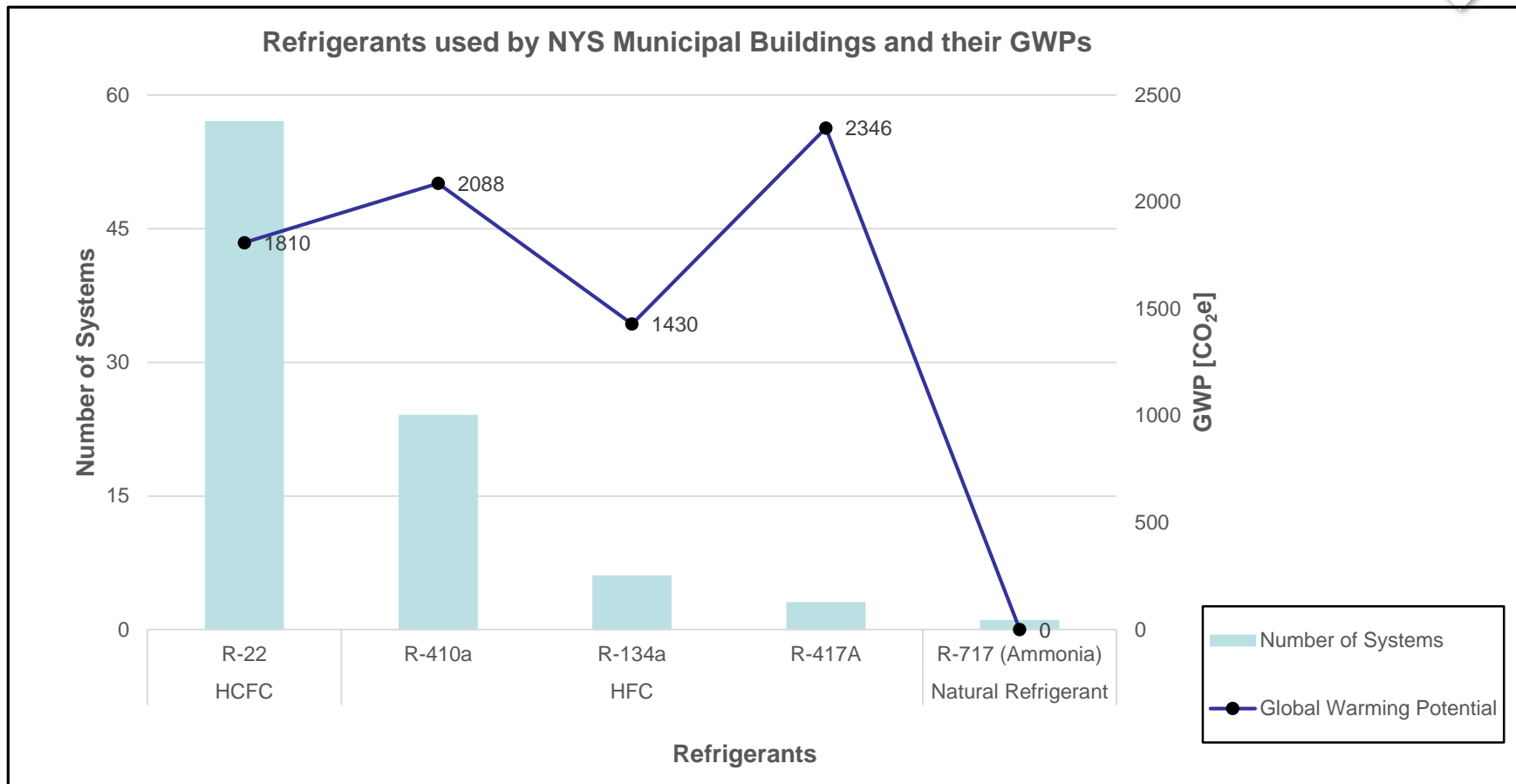


- 10% of all municipalities were contacted - 26 responded



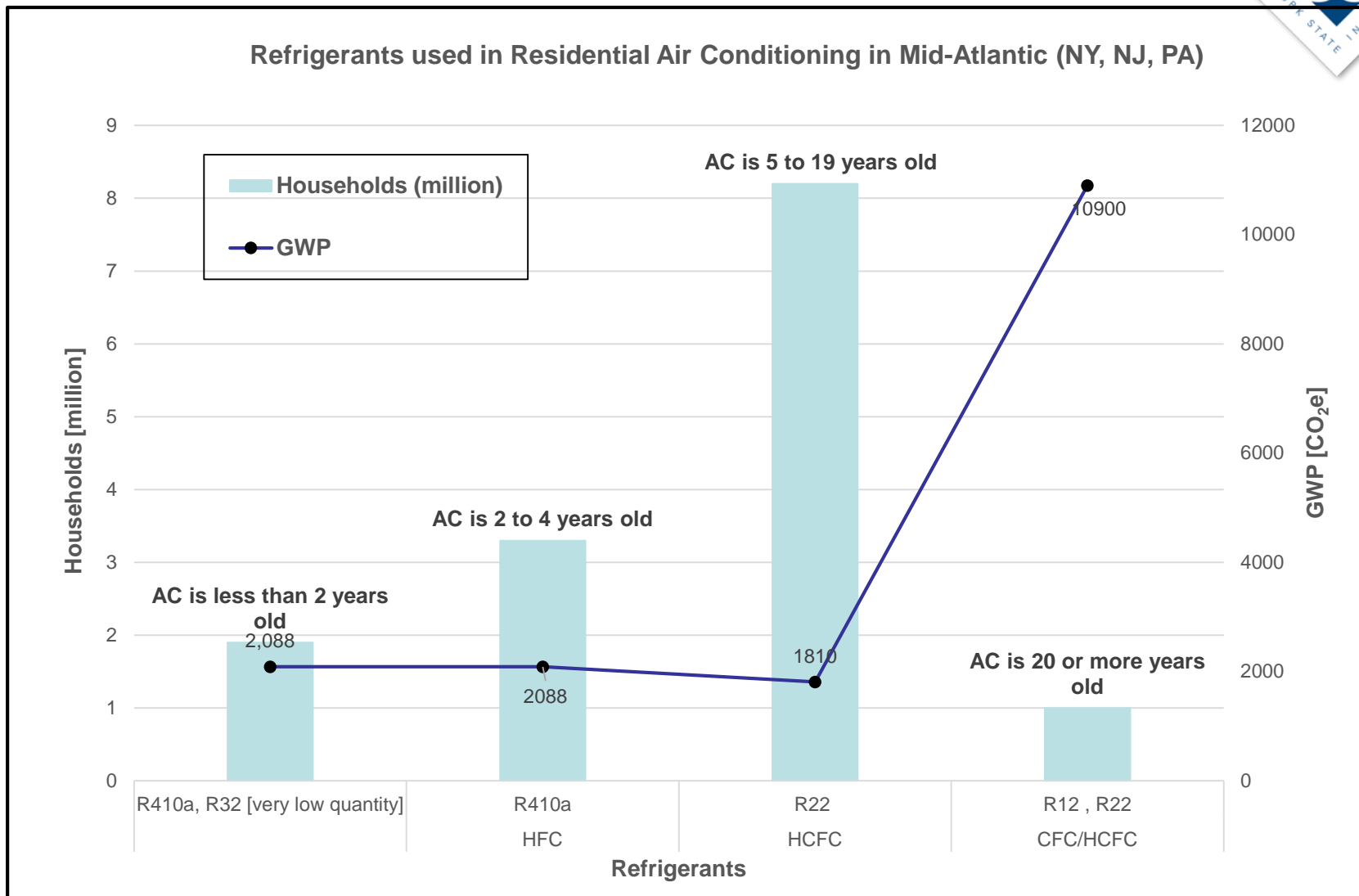
Responding NYS Municipalities

Objectives - Municipalities



<http://www.arenamaps.com/>

Objectives - Residential



Objectives – Present - Summary



- HCFC's are still widely used in supermarkets, municipalities and residents
- Increase focus on education and available funding opportunities through the Climate Smart Communities (CSC) Certification and Grant Program

Objectives – Present



- **2018-2019**

Work with NY Climate Smart Communities program to educate municipalities on fluorinated gases used in refrigeration equipment and discuss alternatives through outreach and education

- Research into the CSC program and available resources showed an **emphasis** on energy emission impacts and opportunities and a **de-emphasis** on refrigerant impacts and opportunities

Climate Smart Community Resources



- Greenhouse Gas Inventory Guide for Local Operations (by NYSERDA contractor)

If data is either difficult to obtain or not available (e.g., leaked refrigerants), **don't worry**. Document what you need and develop a plan to start collecting the missing data for an

update to your GHG inventory. Refrigerants data is considered *de minimis* in the [Local Government Operations Protocol \(LGOP\)](#), which means that the percent of emissions resulting from that source is so small it is not necessary to collect that data. If you are missing more critical data (e.g., accurate fuel consumption records by vehicle) refer to the [LGOP](#) for alternative methods for calculating GHG emissions using estimates.

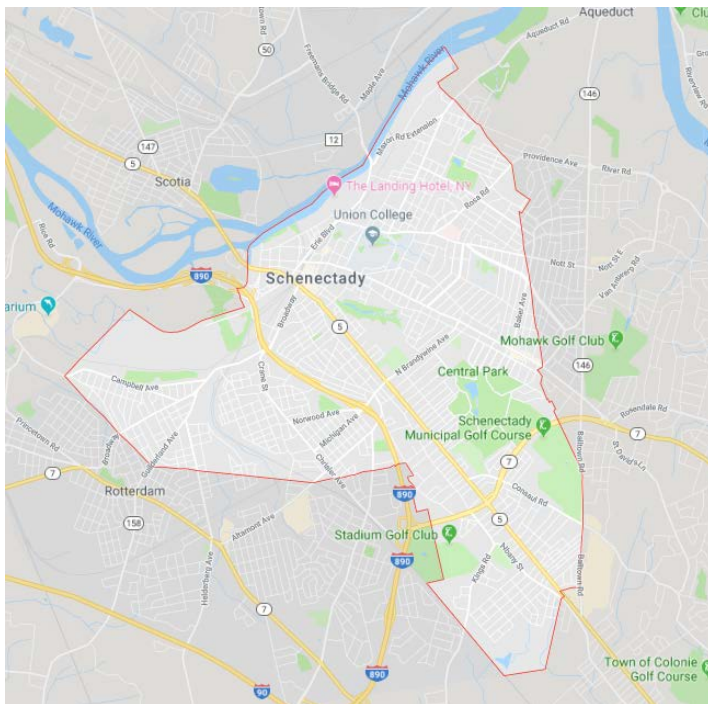
➤ Include contact information of Technical Lead for questions.

Emphasizes energy emission inventory and de-emphasizes refrigerants

Climate Smart Community Resources



- Local Government Operations Protocol (LGOP)
Does not allow inclusion of HCFC's (R-22) in GHG inventories because of the phase-out.
- Results in missed opportunities



- Schenectady 2010 GHG inventory
- 2,250 lbs of refrigerant leaked from the County ice rink cooling system.
- Assumed R-22
- 1,851 metric tons of CO₂e

Schenectady



Missed opportunity:

If included, the leaked refrigerant would have accounted for 1,851 metric tons of GHG emissions, the second highest contributor at 16% of the total.

SECTORS	TOTAL GHG EMISSIONS CO ₂ e (metric tons)
Buildings & Other Facilities*	6,021
Vehicle Fleet	1,627
Employee Commute	1,581
Government Generated Solid Waste	215
Streetlights & Outdoor Lighting	138
Airport Facilities**	99
TOTAL	9,681

← 1,851

Next Steps



Goals

Update Climate Smart Communities program language and educate municipalities and communities on:

- Impacts of fluorinated gases
- Opportunities to mitigate
- Available resources
- Timeline:
 - April 1, 2019: CSC program language revised
 - May 9, 2019: CSC webinar
 - Fall 2019: Attend Association of Counties

Thank-you!



Questions?