

# NJ Climate Pollution Reduction Grant Program (CPRG) Halogenated Gases Workshop

November 13, 2023, 10:00 AM



## Meet the Team

#### Lead Presenter



Doug Benton NJDEP, Climate Change & Clean Energy

#### **Co-Presenter**



Molla Sarros NJDEP, Climate Change & Clean Energy

# What is CPRG?

The Climate Pollution Reduction Grant (CPRG) program is a nationwide, twophase EPA grant, funded via the Inflation Reduction Act

Phase One: \$250 Million

#### Phase Two: \$4.6 Billion

Noncompetitive planning grants to states, local governments, tribes, and territories to develop and implement climate action plans for reducing greenhouse gas emissions and other harmful air pollution.

**Competitive implementation grants** to carry out the greenhouse gas reduction measures proposed in the climate action plans.



For more information visit: <u>https://www.epa.gov/inflation-reduction-act/climate-pollution-reduction-grants</u>

# CPRG Phase I · Grant Recipients

#### 4 Planning Grants covering New Jersey



State of New Jersey NJDEP Lead Statewide

#### New York-Newark-Jersey City, NY-NJ-PA Metro Area

#### NYCEDC + NJTPA Lead

Covered Counties: Essex, Hunterdon, Morris, Sussex, Union, Middlesex, Monmouth, Ocean Somerset, Bergen, Hudson, Passaic

Allentown-Bethlehem-Easton, PA-NJ Metro Area LVPC Lead Covered Counties: Warren

#### Philadelphia-Camden-Wilmington, PA-NJ-DE-MD Metro Area DVRPC Lead Covered Counties: Burlington, Camden, Gloucester, Mercer, Salem



CPRG Workplan Areas within New Jersey

# CPRG Phase I · Planning Grants

#### One planning grant, three deliverables over 4 years

Priority Climate Action Plan (PCAP) Due March 2024

- Near-term, implementation ready, priority greenhouse gas reduction
- Prerequisite for implementation grant

Comprehensive Climate Action Plan (CCAP) Due Mid-2025

 All sectors/significant greenhouse gas sources and sinks

 Near- and long-term greenhouse emission reduction goals and strategies Status Update Report Due 2027

 Update on implementation, analysis and plans

 Progress and next steps for key metrics

#### New Jersey's Priority Climate Action Plan (PCAP)



NJ GREENHOUSE GAS SOURCES & SINKS 2020

### New Jersey's Priority Sectors for PCAP

- Transportation
- Buildings
- Electric Generation
- Organic Waste
- Hydrofluorocarbons (HFCs) / Highly Warming Gases
- C-Sequestration



#### CPRG Phase II · Implementation Grants Eligibility

#### **Open to entities who:**

- 1. Received a CPRG planning grant, or
- 2. Eligible entities that did not receive a CPRG planning grant *but...* 
  - ...*are* applying for funds to implement measures included in an applicable Priority Climate Action Plan

#### **Eligible Applicants**

- Metropolitan Statistical Areas (MSA)
- County
- Municipality
- > Air pollution control agency

> Tribe

## CPRG Phase II · Implementation Grant Key Considerations

#### Eligible entities can submit <u>at most</u> two lead applications



#### Eligible entities can be a partner in numerous coalition applications



EPA will not award multiple grants to implement the same measures in the same location

Coalitions may not submit multiple applications for the same set of GHG reduction measures using different lead applicants

Applications will be evaluated holistically

## CPRG Key Deadlines

September 2023	Implementation Grant NOFO Issued	
Feb 1, 2024	Notice of Intent to Apply for Implementation Grant Due	
March 1, 2024	PCAP due	
April 1, 2024	Implementation Grant applications due	
July 2024	Awards for Implementation Grants	
Summer 2025	CCAP due	
2027	Status Report due	

## Timeline for PCAP Development



# Upcoming Stakeholder Events

#### **Upcoming Topical Workshops**

- November 22<sup>nd</sup> Buildings + Electric Generation
- November 28<sup>th</sup> Transportation

Additional Events will be scheduled for other sectors and interest groups

Visit Our Webpage + Join the Email List https://dep.nj.gov/climatechange/mitigation/cprg/



### Halogenated Gases Sector Deeper Dive

### Where are Halogenated Gases?



Vehicle AC



Refrigerators



AC unit/heat pumps



Dehumidifiers



Foam roof insulation



Fire extinguishers

### Refrigeration Compressor Rack



# Refrigeration Control Panel & Leak Detection



# Equipment Leakage Rate & Charge Range

Source Significance	Equipment Type	Annual Leakage Rate	Charge Range (kg)
Significant high- GWP refrigerant emission source	Chillers	2 - 15 %	10 - 2000
	Industrial process refrigeration including food processing and cold storage	7 - 25 %	10 - 10000
	Medium and large commercial refrigeration	10 - 35 %	50 - 2000
Insignificant high-GWP refrigerant emission source	Domestic refrigeration	0.1 - 0.5 %	0.05 - 0.5
	Mobile air conditioners	10 - 20 %	0.5 - 1.5
	Residential and commercial A/C, including heat pumps	1 - 5 %	0.5 - 100
	Stand-alone commercial applications	1 - 15 %	0.2 - 6
	Transport refrigeration	15 - 50 %	3 - 8

## Food Refrigeration Case



## **Rooftop Grocery Refrigeration System**



## Rooftop Grocery Refrigeration System



# Context: Common Refrigerants in New Jersey



#### R-22 | The Most Common Refrigerant

- 1,810 times the potency of carbon dioxide,  $CO_2$
- I pound of R-22 ~ 1 ton of carbon dioxide.<sup>1</sup>
- One 30-lb tank of R-22 >  $CO_2$  emitted by driving ~7 cars yearly

## **R-404A** | Most common replacement for R-22 in supermarket systems

- Most common refrigerant at NJ facilities
- 2x the potency of R-22 and 3,920x the potency of  $CO_2$
- 30-lb tank holds the  $CO_2$  from driving >14 cars yearly

<sup>1</sup> Data from CARB, <u>High-GWP Refrigerants | California Air Resources Board</u>, accessed 7/7/2023.



# Halogenated Gases Snapshot

#### CO<sub>2</sub>-Equivalent Emissions by End Use in 2018 (MMT CO<sub>2</sub>e)



Projected Emissions "Business-as-Usual" (without Phaseouts)



#### Business-as-Usual Emissions 2018 – 2050

# Halogenated Gases - Refrigerant Usage Must Change



Refrigerant-Header-Image-1.png (2122×1194) (sciencepolicyreview.org)

# The State of Halogenated Gases

#### Count of Facilities in NJ Reporting Refrigerant Usage in 2022\*



\*Preliminary Data for 4th quarter of 2022



# Existing Programs

#### HFCs Gases Law (P.L. 2019, c.507)\*

• Phases out sale, lease, rent or installation of certain equipment or products containing HFCs or other GHGs by 2024.

#### GHG Monitoring and Reporting Rule (N.J.A.C. 7:27E)

• Facilities with >50 lbs high-GWP refrigerant must register and report usage to DEP

#### **EPA Partners' Responsible Appliance Disposal (RAD)**

#### Number of Facilities based on Sum of Charges of All Refrigrants in Use



## Potential Opportunities





# Thank you!

