

**Opteon™**

# **Regulations Impacting The HVACR Industry**



**Chemours™**

**Feb 2023**

# AGENDA

- 01** Regulatory Landscape
- 02** Types of Regulations
- 03** California Regulatory Update
- 04** Federal Regulatory Update
- 05** Industry Participation



# Regulatory Landscape



## International Level

### Montreal Protocol

- Phaseout of products like R-22

### Kigali Amendment

- Phasedowns of products like R-410A, R-404A, and R-134A



## US State Level

### CARB

- 2025 timeline for A/C less than 750 GWP
- 2022 timeline for Ref less than 150 GWP
- Avg GWP requirements Food Retail

### Climate Alliance

- 25 states & territories following similar plans



## US Federal Level

### AIM Act

- Passed December 2020
- Finalized September 2021
- GWP Limits by Application Published December 2023

### SNAP Rule 23

- A2L refrigerants in residential AC equipment



The international community has been operating under Kigali & Montreal protocol

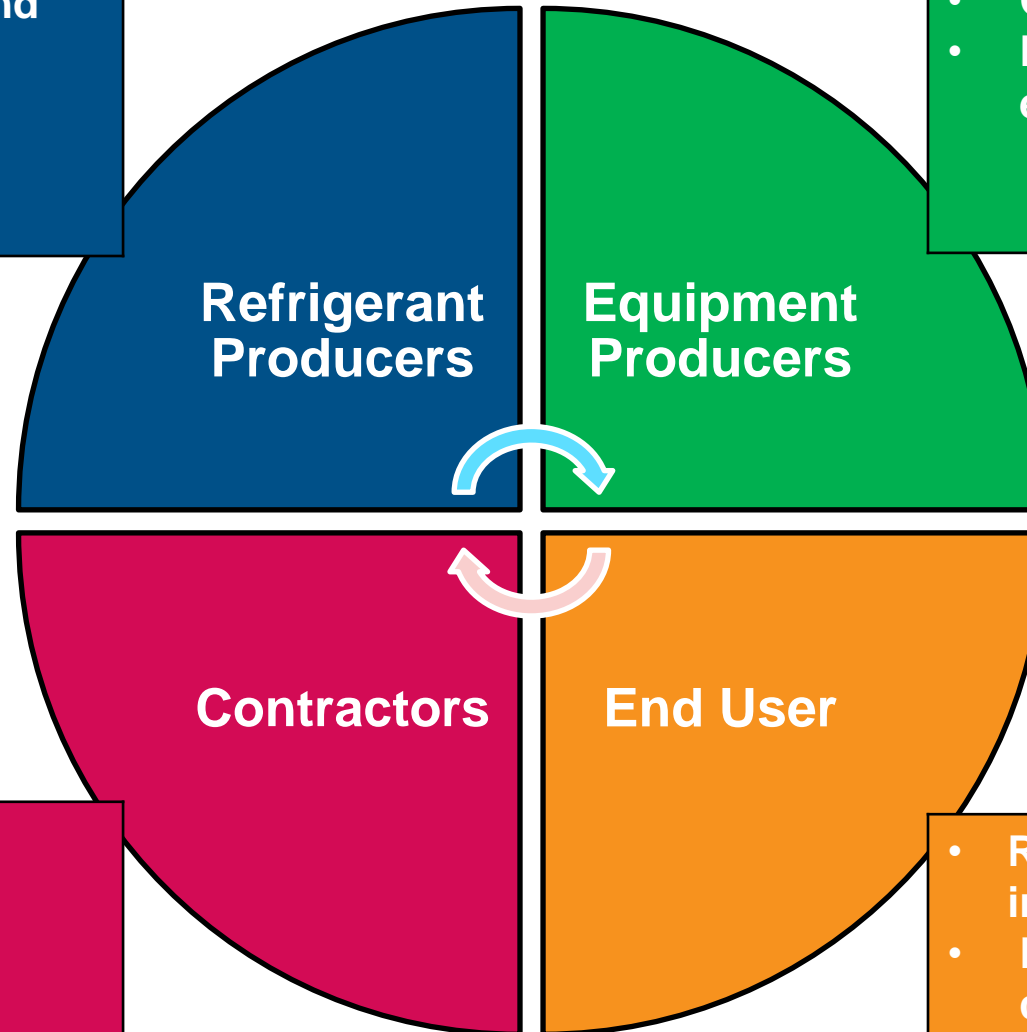
In the absence of Federal activity, the states began regulating

Federal regulations will help ensure a consistent industry approach

# Types of Regulations Coming Into Effect

- Limits on the production and importation of HFCs
- Limits on new HFC technologies

- GWP limits for new equipment
- End dates for legacy equipment



- Stronger recovery requirements for all applications
- Mandatory reclaim use requirements

- Reporting requirements for installed systems
- Equipment types, equipment charge, yearly leak rates

# California Air Resources Board-Refrigerant Regulations

## California Sector Controls:

California Air Resources Board (CARB)	Type	Sub-Type	Proposed Refrigerant GWP Limit	Effective Date
	New Chillers	Designed for min. evaporator temp > +35	<750	1/1/2024
	New Chillers	Designed for min. evaporator temp ≤+35 °F and > -10 °F	<1500	1/1/2024
	New Chillers	Designed for min. evaporator temp ≤-10 °F and > -58 °F	<2200	1/1/2024
	Ice Rinks	Retrofit and remodeled ice rinks	<750	1/1/2024
	Ice Rinks	New construction ice rinks	<150	1/1/2024
	Air Conditioning Equipment	Air conditioning, equipment (new), residential and non-residential	<750	1/1/2025
	New Refrigeration Equipment	Non-residential, with >50 lb refrigerant	<150	1/1/2022

## Senate Bill 1206 Importation Bans:

California SB1206	GWP Limit	Product Example	GWP Limit	Effective Date
	GWP Greater than 2200	R-404A & R507	<2200	1/1/2025
	GWP Greater than 1500	R-410A	<1500	1/1/2030
	GWP Greater than 750	R-448A & R-449A	<750	1/1/2033
<b>All bans only include virgin material. Reclaim material can still be used to service equipment.</b>				

# California Air Resources Board (CARB) Retailer Specific Regulations



## Your Guide to California State HFC Regulations for Food Retail

### California Air Resources Board (CARB) Activity

In September 2018, the California Cooling Act (SB 1013) adopted SNAP Rules 20 and 21. Additional regulations related to the Short-Lived Climate Pollutant (SLCP) plan are proposed, as shown below. CARB is currently seeking stakeholder input.



Companies owning or operating 20 or more retail food facilities and national supermarket chains:

#### Proposed Refrigerant GWP Limit<sup>1</sup>:

Average GWP <1400 or 55% reduction in GHG<sup>2</sup> below 2019 baseline

<sup>1</sup>GWP - IPCC 4th Assessment Report, AR4    <sup>2</sup>Greenhouse Gas Potential

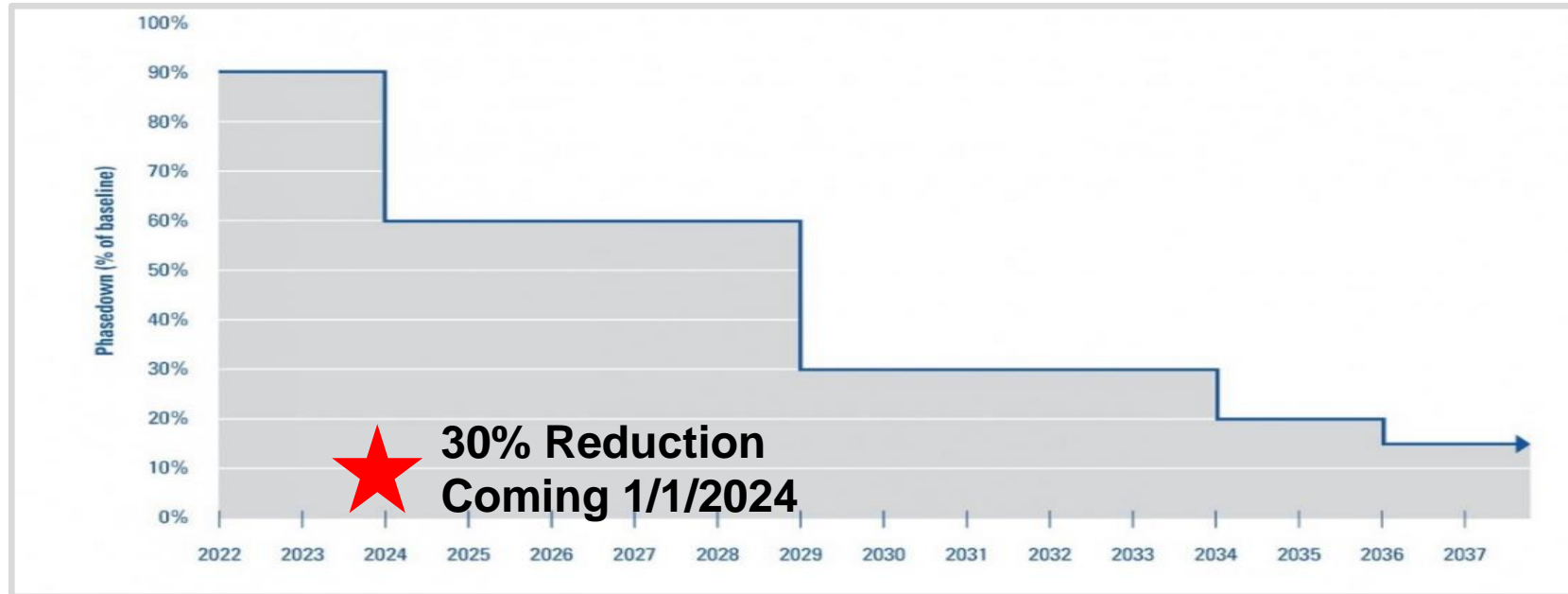
### Global Warming Potential (GWP) by Refrigerant Type

The table below highlights the GWP counts for each product mentioned in the CA SNAP timeline, to assist you with planning for the 2030 phase down.

Refrigerant	GWP Count
Opteon™ XP10 (R-513A)	631
Opteon™ XP40 (R-449A)	1397
R-134A	1430
R-22	1760
R-404A	3900
R-407A	2107
R-407C	1774
R-407F	1825
R-507A	3985

# The American Innovation and Manufacturing Act

## AIM Act Phase Down Schedule- CO2 Equivalent Basis



Over the next 15 years the consumption of HFC's will be reduced across all segments including:

- Foam blowing agents
- Propellants
- Specialty fluids
- Fire suppression
- Refrigerants

What's happening in 2023?

- Finalize Sector control limits for most applications
- Finalize 2024 on allocations for producers
- Regulations pertaining to recovery and reclaim



# Sector Control Examples

## EPA Proposed Sector Controls:

Environmental Protection Agency-Proposed Rulemaking	Type	Sub-Type	Proposed Refrigerant GWP Limit	Effective Date
	New Chillers	Comfort cooling	<700	1/1/2025
	Residential and light Commercial Air Conditioning / Heat Pumps	Residential and light commercial air conditioning and heat pump systems	<700	1/1/2025
	Retail Food Refrigeration	Supermarket systems with refrigerant charge capacities of 200 pounds or greater	<150	1/1/2025
	Retail Food Refrigeration	Supermarket systems with refrigerant charge capacities less than 200 pounds charge	<300	1/1/2025
	Retail Food Refrigeration	Supermarket systems, high temperature side of cascade system	<300	1/1/2025
	Cold Storage	Warehouse systems with refrigerant charge capacities of 200 pounds or greater	<150	1/1/2025
	Cold Storage	Warehouse systems with refrigerant charge capacities less than 200 pounds	<300	1/1/2025

## Next Steps:

### Technology Transition Petition Global Warming Potential Limits by Application

- The above table is a sub segment of the complete listing. Please consult the full rule for more details
- Petition Public comment period closed on January 30<sup>th</sup>
- Final rule expected to publish in October of 2023

### Allocation Rule (2024-2028) Production and Consumption Allowances for Producers and Importers

- 2024-2028 Allocation Draft Rule Published
- Public Comment Period Closed

### Refrigerant Management Refrigerant Recovery, Reclamation, and Reporting

- Technician Service Practices for Refrigerant Recovery
- Refrigerant Reclaim Practices
- End User Reporting Requirement



# The American Innovation and Manufacturing Act

*An orderly phasedown of HFCs requires **everyone** from contractors and end users through manufactures and producers to collaborate and reduce demand for higher GWP products*

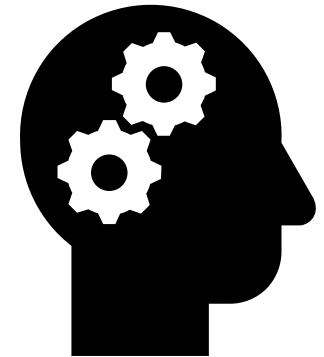
Retrofit systems away from high GWP HFCs such as R-404A to Opteon™ XP40



Repair leaks and monitor your system charge



Utilize lower GWP products in new equipment



# We Are Here To Help!

*The AIM Act is still in progress; Stay up to date and ask for help!*



Product Quality



Global Availability



Technical Support



Engineering Support



Training



Regulatory & Technology Insights





**Thank you!**

For more information, go to  
**[Global Regulations Driving the Use of Opteon™  
Refrigerants](#)**