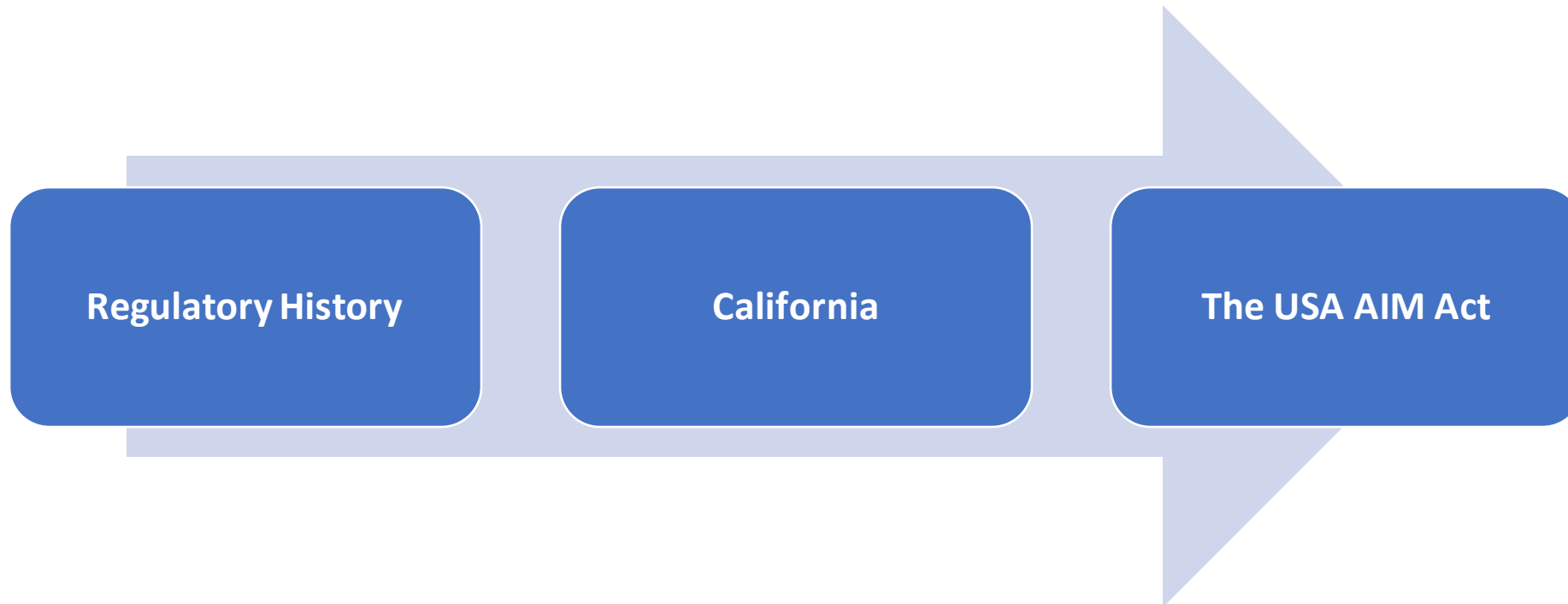




Regulations Impacting The HVACR Industry

www.opteon.com

Agenda



Regulatory Landscape



International Level

Montreal Protocol
Phaseouts, like R-22
Kigali Amendment
Phasedowns, like R-410A



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 following similar plans



US Federal Level

AIM Act
Passed December 2020
Finalized September 2021
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

New Federal regulations will re-align the industry

California CARB Regulations

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 $\leq +35$ °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 icerinks	<750	1/1/2024
Ice Rinks	New construction icerinks	<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
Existing Refrigeration Equipment	Companies with >20 retail food facilities	Average GWP <2500 or 25% reduction in GHGp below 2019 baseline	1/1/2026
Existing Refrigeration Equipment	Companies with >20 retail food facilities	Average GWP <1400 or 55% reduction in GHGp below 2019 baseline	1/1/2030
Existing Refrigeration Equipment	Companies with <20 retail food facilities	Average GWP <1400 or 55% reduction in GHG2 below 2019 baseline	1/1/2030

Additional sector controls are in place in California. Please consult the CARB regulation or contact our team for specific questions about your application

California CARB Regulations

Cooling Act (SB 1013) adopted regulations related to the Short-term phase down, as shown below. See the table for further input.



For operating 20 or more retail food establishments:

Refrigerant GWP Limit¹:

100 or 55% reduction from 2019 baseline

¹Report, AR4 ²Greenhouse Gas Potential

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

Opteon™ XP10 and XP40 are ideal for many applications to meet the regulations noted above.



Reliable



Compatible



Cost Effective



Field Tested and Proven



Sustainable



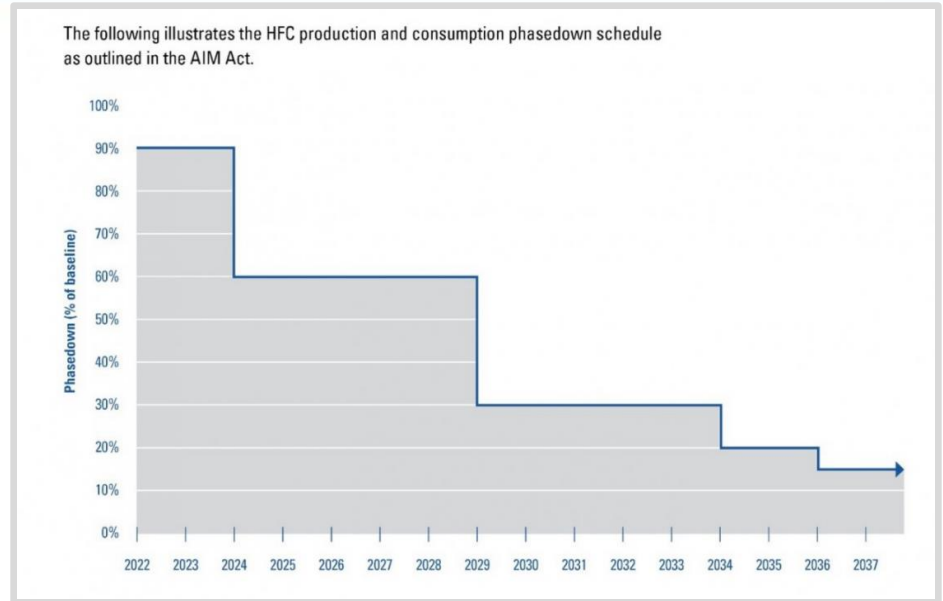
The American Innovation and Manufacturing Act

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

Other impacts of the AIM Act include:

- Ban on Disposable cylinders (DACs)
- Tracking system for all products with QR codes
- Defines penalties for illegal activity



Time Horizon	Baseline	Baseline Reduction
2021	100%	0%
Through 2023	90%	10%
2024 - 2028	60%	40%
2029- 2033	30%	70%
2034-2035	20%	80%
2036 and thereafter	15%	85%





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

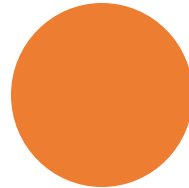


Utilize lower GWP products in new equipment

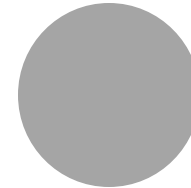


We Are Here To Help!

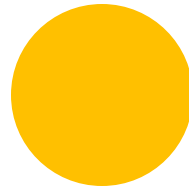
The AIM Act is still in progress; Stay up to date and ask for help!



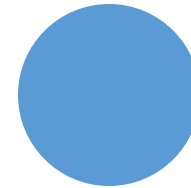
Product Quality



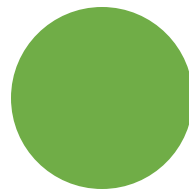
Global Availability



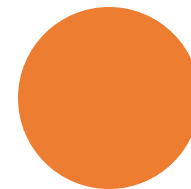
Technical Support



Engineering Support



Training



Regulatory & Technology Insights

Opt
for better

 **Opteon™**
Refrigerants

For more information, go to
[GLOBAL REGULATIONS DRIVING THE USE
OF OPTEON™ REFRIGERANTS](#)

February 3, 2022

 **Chemours™**