

# Sustainable Refrigeration Summit

Connecting the Pieces for Supermarket Refrigeration Solutions



NORTH AMERICAN  
**Sustainable  
Refrigeration  
Council**

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# New York State Update on HFC Policy

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# Climate Leadership and Community Protection Act (2019)

State agencies are required to reduce all GHG emissions:

- 40% by 2030, from 1990 levels (40x30)
- 85% by 2050, from 1990 levels (85x50)

Using a 20-year  
Global Warming Potential

To achieve a goal of:

- Net zero emissions by 2050

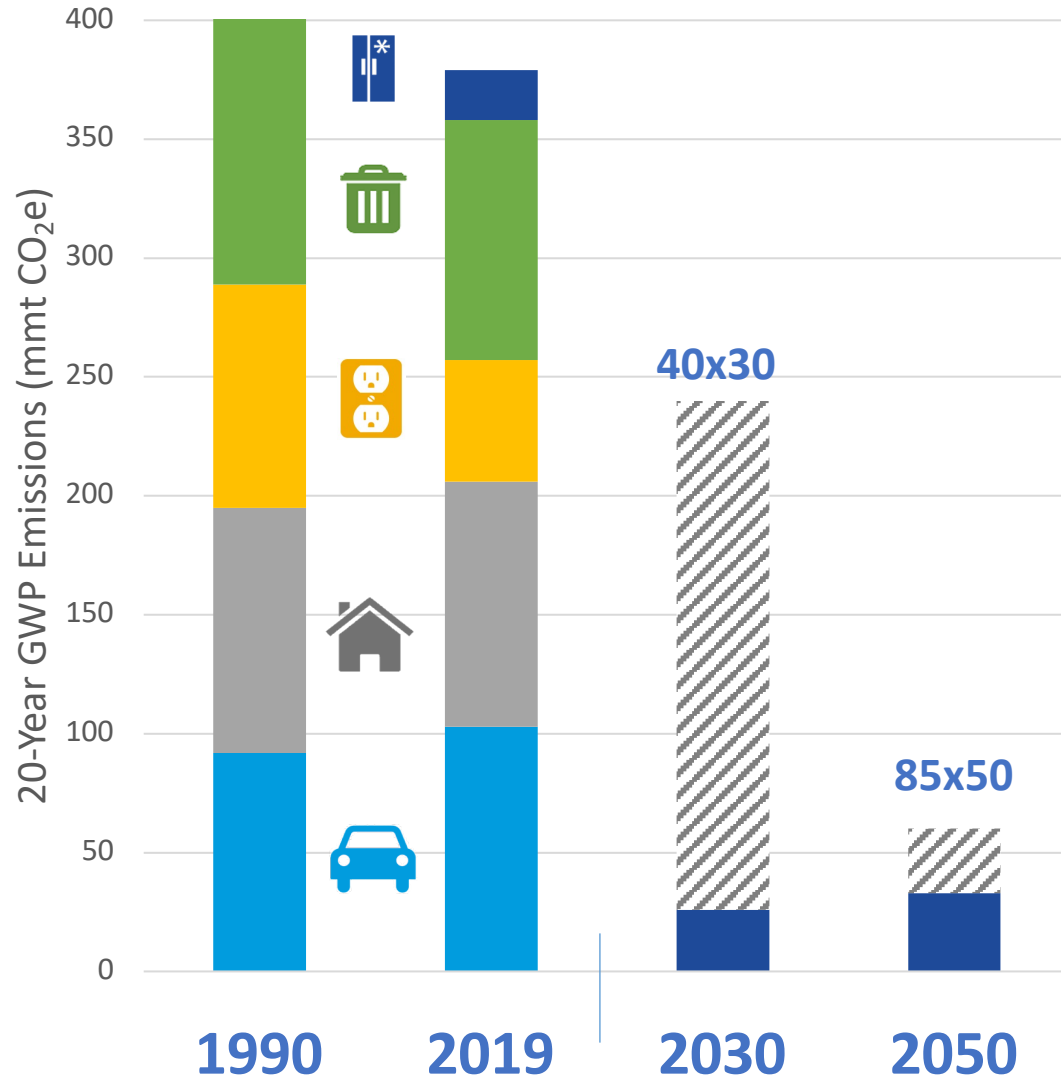
NY's Climate Change Scoping Plan: [www.climate.ny.gov](http://www.climate.ny.gov)



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# New York State Emission Trends and Requirements



## HFCs in Context:

- HFC uses are growing.
- HFCs take up a significant % of NY's GHG budget in 2030 and 2050.
- Challenge: Reduce HFC emissions while supporting building electrification.

# Part 494 HFC Standards and Reporting

NY joins the US Climate Alliance states in regulating HFCs.

Adopted Part 494 in 2020 to backstop SNAP Rules 20, 21.

- Prohibits the highest GWP HFCs in food stores

Next step: Expand Part 494 to complete this phasedown.

- The question is how to align with other states but also find solutions that work for NY food stores.
- Also looking at incentives and demonstration projects.



# Key Considerations for New York

## 1. NYS regulations cannot use the 100-year GWP

- Law uses GWP-20, which is also very high for R-448/449
- Natural refrigerants are the only available and future-proof solution
- Ideas: Use GWP-20, composition, or refer to refrigerants by name

## 2. Objective is to reduce and ultimately eliminate emissions

- Ideas: Extend the phasedown timeline by pairing with refrigerant management requirements
- Question for you: How to avoid expensive, temporary solutions?

## Comparing Refrigerants

	Standard 100-Year GWP	NY Climate Act 20-Year GWP	% HFCs	Safety Group	Social Cost * (\$ per ton)
R-22	1810	5280	0	A1	-
R-404a	3922	6437	100	A1	\$478,000
R-407a	2107	4406	100	A1	\$247,200
R-448a/449a/449b	1386-1411	2995-3105	73-76	A1	\$160,000
R-32	675	2430	100	A2	\$76,000
R-513a	629	1663	44	A1	\$79,000
R-1234yf	>1	1	0	A2L	\$128
R-290	3	<1	0	A3	\$128
R-744	1	1	0	A1	\$128
R-717	0	0	0	B3	\$0

### Social Cost of Total Charge Loss:

1000lbs R-407a = \$110,000 vs 1000lbs R-744 = \$55 [= 50 gallons gasoline]

Total Charge Loss of R-744 every year for 50 years = \$2400

\*Cost of 2020 emissions using NY's central 2% discount rate



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# Request for Feedback (Issued June 2022)

## Example items for supermarket systems:

- Prohibit HFCs in new construction by 2024
- Existing stores to phase out HFCs by ~2040
  - Prohibit new/retrofit equipment by 2034
  - Chain weighted avg = 2500-3000 GWP-20 by 2030
  - Virgin HFC refrigerants no longer sold after 2027/2034
  - Leakage lowered to 9% per year





# Part 494 Rulemaking Timeline

NYS is taking informal feedback now. Once a formal proposal is issued, there will be a 60-day comment period.

See the Request for Feedback at:

[www.dec.ny.gov/regulations/119026.html](http://www.dec.ny.gov/regulations/119026.html)

Contact us at: [climate.regs@dec.ny.gov](mailto:climate.regs@dec.ny.gov)