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# **CARB Activities Relating to Mobile Refrigerants**

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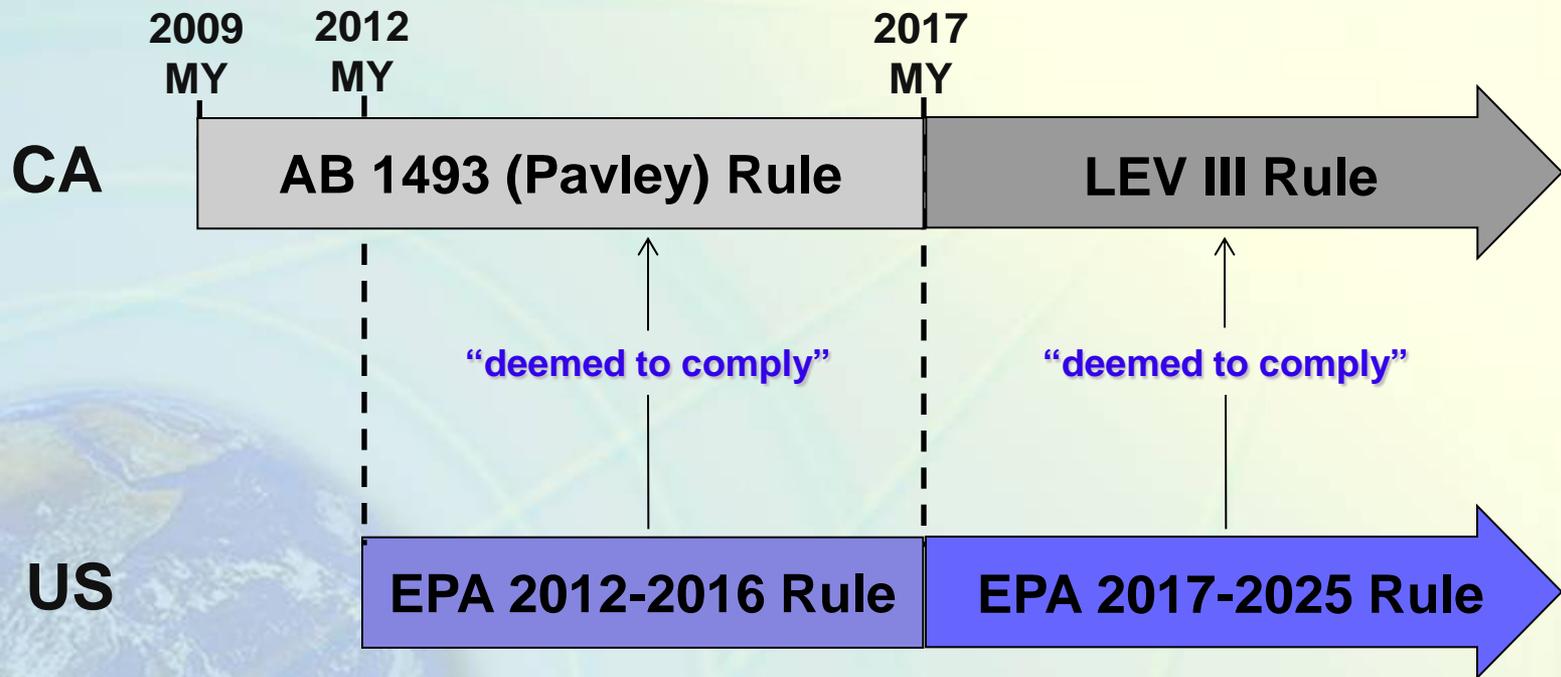
***California Air Resources Board***



# Outline

- Review of existing programs
- Regulatory activities for LD mobile refrigerants
- Regulatory activities for HD mobile refrigerants
- Summary

# Review of Existing Programs - LD MVAC Credit Programs

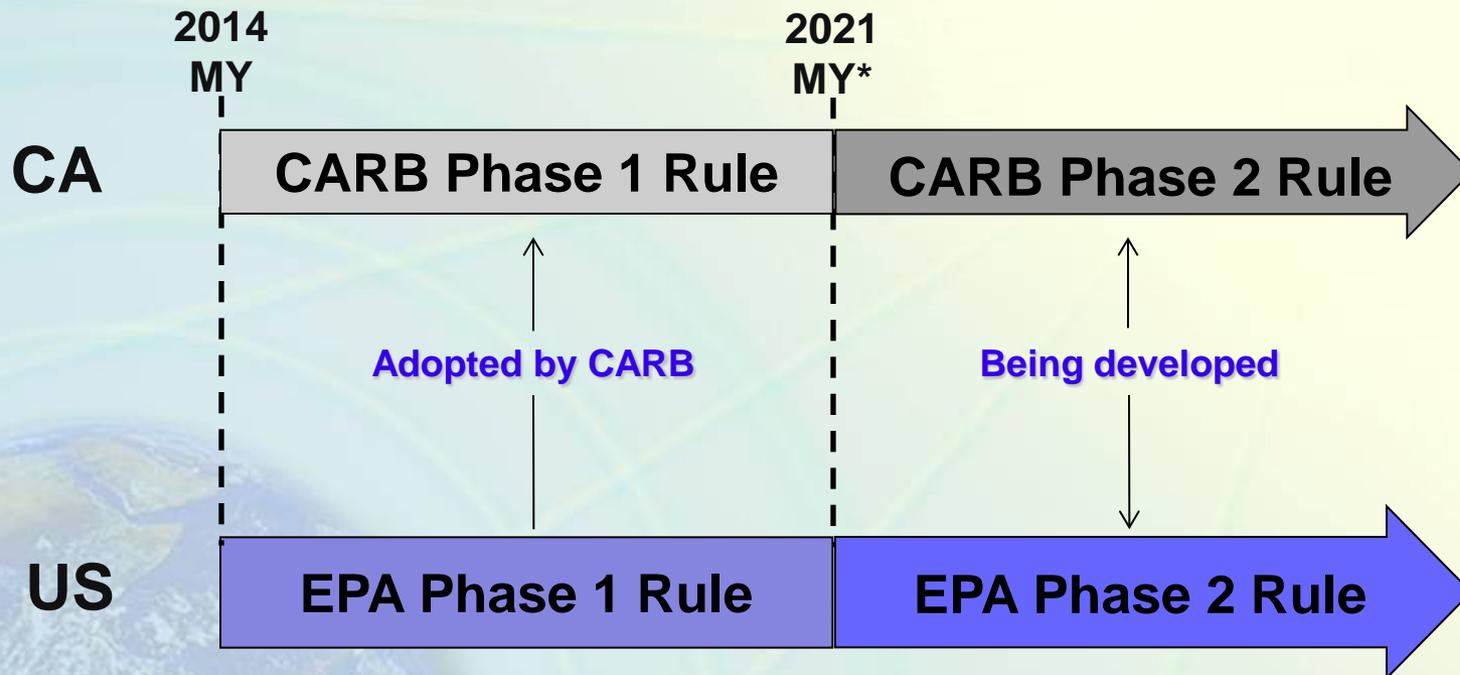


# Review of Existing Programs - “Small Can” Regulation



- Measure to reduce HFC-134a emissions from do-it-yourself automotive AC service
- Adopted by the Board in 2009
- Became effective on 1/1/2010

# Review of Existing Programs - HD MVAC Leakage Standards



\* 2018 MY for trailers

# Regulatory Activities for LD Mobile Refrigerants - Commenting on SNAP Proposed Rule

In August, 2014, U.S. EPA issued a proposed rule to change the status of HFC-134a from acceptable to unacceptable for use in new LD MVAC. Final rule was published in July, 2015.

- CARB provided supportive comments to U.S. EPA on the proposed rulemaking.
- CARB recommended additional subsectors (e.g. HD MVAC, TRU, refrigerated shipping container) for which high-GWP refrigerants could be phased out in the future.

# Regulatory Activities for LD Mobile Refrigerants - “Small Can” Regulation Amendment

- Positive impacts of regulation
  - Significant sales reduction (1.9 million → 1.1 million) indicating effectiveness of self-sealing valve
  - Less overall emissions (0.85 → 0.47 MMTCO<sub>2</sub>e)
  - Less overall consumer expenses (\$19 million → \$15 million estimated)
- Issues identified during implementation
  - Low container return rate (~70% vs 95% benchmark)
  - Low container heel (2-4% vs 22% prior to regulation)
  - Deposits for unreturned containers retained by retailers
- Amendment options being considered
  - Eliminate refundable deposit
  - Eliminate container return program and requirement to recover refrigerant from returned containers

# Regulatory Activities for HD Mobile Refrigerants - Commenting on EPA HD Phase 2 GHG Rule

In July, 2015, U.S. EPA issued a proposed rule to establish GHG emission standards for medium- and heavy-duty vehicles and engines for MY 2018-2027 (“Phase 2” rule).

- CARB intends to provide comments and recommendations
  - Support extension of AC leakage standard to vocational vehicles.
  - Recommend inclusion of a low-GWP requirement for HD MVAC, separate from a leakage standard.
  - Recommend establishment of a refrigerant usage monitoring program for TRU, in order to collect TRU leakage data for future rulemaking.
  - Encourage phase-out of high-GWP refrigerants for refrigerated transportation under SNAP as soon as viable alternatives become available.

# Regulatory Activities for HD Mobile Refrigerants - CARB Considerations

Sustainable Freight Strategy discussion draft (April, 2015),  
and Short-lived Climate Pollutant Reduction Strategy  
concept paper (May, 2015)

- CARB will consider developing regulations to phase out high-GWP refrigerants in HD MVAC and refrigerated transportation, if such rules were not enacted at federal level.

## Summary

- CARB supports or recommends U.S. EPA to phase out high-GWP refrigerants in new LD MVAC, HD MVAC, and refrigerated transportation.
- CARB will consider developing regulations to phase out high-GWP refrigerants for HD MVAC and refrigerated transportation, if such rules were not enacted at federal level.
- CARB plans to amend its regulation on small cans of HFC-134a for DIY automotive AC service.

## Contact Information

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<http://www.arb.ca.gov/cc/hfc-mac/hfc-mac.htm>