



F-gas Reduction Incentive Program (FRIP): Commercial and Industrial Refrigeration Public Comments Summary

This document includes a summary of the comments received during the public comment period, including comments submitted by email to FRIP@arb.ca.gov and comments submitted during the public workshop held on August 15, 2024, for the F-gas Reduction Incentive Program (FRIP) Commercial and Industrial Refrigeration Draft Funding Guidelines, along with the associated actions/responses from the California Air Resources Board (CARB) addressed in the [Final Funding Guidelines](#). Thank you to all who provided comments.

Note: If you require this document in an alternate format or language, please contact Negin Navaei at FRIP@arb.ca.gov or (279) 208-7119. TTY/TDD/Speech to Speech users may dial 711 for California Relay Service.

September 17, 2024

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Overview

Public Comment Period: August 1 - August 22, 2024

Public Comment Topic: [FRIP Round 2 Commercial and Industrial Refrigeration Draft Funding Guidelines](#)

Organizations that Provided Comments via Email: 24

- 350 Humboldt/Climate Action California
- ATMOSphere
- Canteen
- Copeland
- DC Energy Services
- Russell
- Ecology Action
- effecterra
- EIA
- Elkhorn Products
- Flow Environmental Systems
- Hilmar Cheese Company
- Honeywell
- Hudson Technologies
- IGSD
- IIAR
- Lodon
- NRDC
- ORTUS, LLC
- Professional HVAC/R Services Inc
- Ukiah Natural Foods
- VaCom Technologies
- Youthpower Climate Action Network
- One member of the public

Public Workshop:

- Held on August 15, 2024
- 105 unique participants attended
- [Workshop video and materials](#)

Comments and Actions/Responses: The comments received by CARB staff have been modified for clarity and concision and aggregated in the chart below. If you do not see your submitted comments reflected in this aggregation, please contact CARB staff at FRIP@arb.ca.gov.

Most Common Comments

Topic	Public Comment Received	FRIP Action/Response
ASHRAE safety group classifications	Clarify if A3 and A2L refrigerants are eligible for funding.	CARB clarified in the Funding Guidelines that eligibility for refrigerant technologies is based on GWP and not safety group classifications.
Charge size minimums	Lower charge size requirement or change charge size requirement to be measured per facility instead of per system to allow facilities with smaller systems to be eligible for funding for the industrial and cold storage sectors.	CARB updated the charge size requirement to be measured per facility.
Energy efficiency	Concern about indirect energy consumption impact of refrigerants vs. direct impact of reducing refrigerant global warming potential (GWP), including for heavy commercial and industrial applications.	CARB understands the concern and will continue to improve our understanding of the impacts of new technologies and encourage energy efficient solutions that also meet the goals of reducing high-GWP fluorinated gases (F-gases), per legislative direction.
First come, first served	Score applications based on several criteria to avoid favoring better-financed organizations.	CARB understands the concern and has included several measures—such as staggered application window for smaller businesses, higher financial awards, and application and technical assistance—in the solicitation to help alleviate these concerns. However, CARB will monitor the outcomes of this solicitation and may choose to update this approach in the future.
GWP minimums	Increase GWP minimum to focus on the replacement of higher-GWP refrigerants (rather than R- 448A/449A).	While CARB expects most applicants to be interested in replacing their higher-GWP refrigerants first, CARB does support the replacement of mid-range GWP refrigerants, which still have significant environmental

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		impacts, with ultra-low-GWP refrigerants.
Hydrofluoro-olefins (HFOs)	Allow low-GWP (<150) HFO systems due to their energy efficiency.	CARB maintains technology neutrality. Per Budget Acts 2022 and 2023, funding in this solicitation is directed toward ultra-low-GWP (<10) refrigerants. Funding ultra-low-GWP technologies is aligned with California's long-term environmental goals per SB 1206 and carbon neutrality per AB 1279.
Hydrofluoro-olefins (HFOs)	Consider non-GWP health impacts and limit HFOs/Per- and Polyfluoroalkyl Substances (PFAS) or encourage PFAS-free alternatives.	CARB maintains technology neutrality and will continue to monitor developments on the impacts of any HFO or hydrofluorocarbon (HFC) refrigerants categorized as PFAS.
Other sectors	<p>Focus remaining \$18 million on air conditioning and heat pumps.</p> <p>Expressed support for increased funding for <50 lb. systems.</p>	CARB will consider these suggestions when designing future solicitations.
Priority communities and independent facilities	<p>Provide increased guidance and application support for facilities in priority communities.</p> <p>Expressed support for CARB's approach for higher incentive awards and increased technical assistance for facilities in priority communities and independent facilities.</p>	CARB thanks commenters for their support. No change made.
Reclaimed refrigerants and retrofits	<p>Fund refrigerant retrofits, particularly to lower GWP technology that use 100% reclaimed refrigerant.</p> <p>Define reclaimed refrigerant.</p>	CARB updated the solicitation to define reclaimed refrigerant and encourages the use of reclaimed refrigerant when retrofitting the primary refrigerant in indirect

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		systems, which is eligible for funding in this solicitation.
Timing	Factor in more time for industrial projects, which are larger and take more time to design. Industrial projects often need at least one year of lead time.	CARB updated the solicitation to provide more time for grantees to order equipment and pushed back the application window. Due to funding liquidation deadlines, CARB cannot significantly delay the application window; however, CARB will take this information into account in future solicitations.

Eligibility

Topic	Public Comment Received	FRIP Action/Response
Certified technicians	Expressed support for CARB's approach requiring installation be completed by certified technicians and recommended requiring documentation for this requirement.	CARB will consider further documentation requirements when designing future solicitations.
Design funding	Allow a small percentage of the incentive award to be available up front to use for project design	CARB will consider funding project design in future solicitations.
F-gas reductions	Clarify if only HFC reductions are eligible for funding or if other F-gases are eligible.	CARB clarified that fluorinated gases are eligible based on GWP thresholds in the Funding Guidelines.
Field-erected systems	Include "field-erected industrial systems" in list of example eligible technologies.	CARB clarified that field-erected systems are eligible in the Funding Guidelines.
Heating, ventilation, and air conditioning (HVAC)	Clarify whether HVAC replacements or combination HVAC/refrigeration (HVACR) replacements are eligible. Clarify whether ambient cooling in industrial spaces is eligible.	CARB clarified when combination HVACR systems are eligible for funding in the Funding Guidelines.
Leaks	Require minimum leak amount to be eligible for funding. Require indirect systems to replace older equipment to reduce potential for leaks.	Grantees are required to comply with CARB's RMP regulation, which supports leak management. The minimum GWP limits for the various sectors were set to

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		allow older systems to be eligible for funding.
Ownership	Clarify eligibility for new grocery stores taking over an existing grocery facility.	CARB updated the solicitation to clarify that the existing equipment must be operational and charged with F-gas refrigerant to be eligible for funding.
Permitting	Require permitting.	CARB requires that grantees comply with all federal, state, and local laws. Compliance with permitting requirements and conditions is required to receive funding. CARB does not have jurisdiction over permitting and thus isn't directly involved in the permitting process.
R-22	Lower the minimum GWP limit to allow for the replacement of R-22.	The minimum GWP already allows for the replacement of R-22 (GWP=1810), using the Intergovernmental Panel on Climate Change Fourth Assessment Report (AR4) values.
Regulation compliance	<p>Expressed support for CARB's requirement that applicants comply with CARB's Refrigerant Management Program (RMP) and recommended documentation of consistent compliance over operations.</p> <p>Limits funds for those to whom regulations already apply.</p> <p>Limit eligibility for facilities that may have sold or transferred ownership or operational control to avoid compliance with regulations.</p>	All facilities that are eligible for funding in this solicitation are required to comply with CARB's RMP and HFC 2020 regulations, including all registration, recordkeeping, reporting, and leak repair requirements.

Funding

Topic	Public Comment Received	FRIP Action/Response
Full replacements	<p>Expressed support for CARB’s approach for higher incentives awards for full replacements over partial replacements.</p> <p>Expressed support for CARB’s proposed funding more full replacements over partial replacements that still use high-GWP refrigerants.</p>	CARB thanks commenters for their support. No change made.
Funding allocations	<p>Expressed support for CARB’s proposed funding breakdown and focus on >50 lb. systems.</p> <p>Increase funding allocated to >50 lb. systems sector.</p>	CARB thanks commenters for their support. No change made.
Funding limits	<p>Increase funding available per project or per company.</p> <p>Allow more funding per company if facilities are in priority communities.</p> <p>Increase awards to early adopters in the industrial and cold storage sectors.</p>	Funding limits were designed with industry experts to incentivize the move to ultra-low-GWP refrigerants. Total funds are limited so limited funds are offered per project to accommodate a higher number of projects. More funding is available for facilities in priority communities.
Incentive structure	Update incentive structure to directly correlate to the amount of high-GWP refrigerant removed.	The current incentive structure correlates to high-GWP refrigerant removed and uses metrics that can be easily confirmed by the North American Sustainable Refrigeration Council (NASRC), which is FRIP’s third-party administrator.
Match funding	Provide more information about eligible match funding sources.	NASRC will provide this information as part of their application support.
Other sectors	Focus remaining \$18 million on tax incentive to reduce F-gases.	CARB will consider these suggestions when designing future solicitations.

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	Focus remaining \$18 million on workforce development and training for ultra-low-GWP technicians.	
Self-contained cases	Concern about unintentionally incentivizing systems with many air-cooled R-290 self-contained cases, which can be energy inefficient.	<p>CARB clarified that self-contained cases, which are already the industry norm, are not eligible for FRIP funding.</p> <p>CARB clarified that only water-cooled microdistributed R-290 systems are eligible for funding. R-290 systems must use charge sizes consistent with the latest safety standards, which have improved energy efficiency.</p>
Small companies and independent facilities	<p>Expressed support for CARB's approach for higher incentive awards for independent facilities.</p> <p>Restrict amount of funding available to large companies so smaller and independent companies do not get left out.</p> <p>Concern about awards offering sufficient funding for small, independent stores to take on these projects.</p>	CARB understands these concerns and has included several measures to support small companies and independent facilities, including funding set-asides, increased incentive awards, and increased technical assistance.

Process

Topic	Public Comment Received	FRIP Action/Response
Advance pay	<p>Advance pay could help smaller stores.</p> <p>Clarify when payments will take place.</p>	CARB understands the need for alternative payment mechanisms to smaller stores so they do not have to shoulder the burden of covering all costs up front, which is why the Funding Guidelines include an option to directly reimburse the equipment supplier rather

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		than a smaller business having to front the cost of the entire system
Application windows	Expressed support for CARB's approach providing two application windows, particularly for smaller companies. Include concept phase.	CARB thanks commenters for their support. No change made.
Funding reallocations	Clarify the criteria and process used for any funding reallocations.	CARB clarified the process for funding reallocations between funding windows in the Funding Guidelines.
Solicitation outreach	Publicize this solicitation through mechanical contractors and through major environmental justice organizations - not just end users. Help solution providers and contractors publicize information about this solicitation and technologies available.	NASRC will continue conducting outreach to a variety of audiences, including those suggested, and will develop additional resources to help stakeholders publicize solicitation information.
Timing	Require installations to be complete by 2026. Expressed support for CARB's approach to limiting the amount of time that grantees can hold funds without starting construction.	CARB updated the solicitation to require that installations be complete by 2026.

Other

Topic	Public Comment Received	FRIP Action/Response
References and documentation in solicitation	Clarify that solicitation refers to CARB's RMP. Provide a glossary for specialized terms and a summary at the beginning of the guidelines.	CARB added these clarifications in the Funding Guidelines. Refrigerants with >2,200 GWP are not eligible for funding in this solicitation.

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	<p>Provide justification for allowing >2,200 GWP refrigerants.</p> <p>Reference Title 20 guidelines.</p>	
Reporting	Provide reporting templates to reduce burden on grantees.	Reporting templates will be provided on the FRIP web portal.
New technologies	Encourage systems that use CO ₂ and R-290 as refrigerants.	CARB takes a technology neutral stance. However, CO ₂ and R-290 are both eligible for FRIP incentives since they both have a GWP less than 10.
Workforce development	Prioritize projects that that involve installation/maintenance companies training technicians on natural refrigerants.	Workforce development in this sector is a priority for FRIP. CARB is continuing to determine how best to support training for ultra-low-GWP technicians and welcomes continued input.
Renewable energy	Encourage powering technologies with renewable energy as a way to enhance climate benefits.	While CARB encourages the use of renewable energy to power refrigeration equipment, that is not the focus of FRIP. California's complementary energy policies already require an increasing use of renewable power.