

STATE AND FEDERAL REGULATION OF HYDROFLUOROCARBONS (HFCs)



OVERVIEW

Hydrofluorocarbons (HFCs) are man-made chemicals that are commonly found in air conditioning, refrigeration, fire suppression systems, foam blowing agents, and cleaning solvents, among other uses. HFCs were developed to replace chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), which were ozone depleting substances (ODS). HFCs are considered potent greenhouse gases (GHGs) due to their heat-trapping properties. California is a first actor in prohibiting HFCs in certain products and many states are following that lead. Many state regulations also require mandatory disclosure, notification, reporting, and recordkeeping requirements. Federal regulations proposed in late May 2021 will start by phasing down the manufacturing and import of HFCs and products containing HFCs. Additional federal regulations are expected to be proposed concerning use of HFCs.

BACKGROUND

The Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer is triggering a global phase-down of HFCs. Prior to this Amendment, HFCs expanded in use after the Montreal Protocol phased out ODS. While HFCs represent a small percentage of total global GHG emissions, their potency and common usage

resulted in an amendment to the Montreal Protocol during the 2016 climate summit in Kigali, Rwanda. The Kigali Amendment applies a phase down approach to reducing HFCs, resulting in an 85 percent decrease by 2036 for developed countries and by 2047 for developing countries.

FEDERAL AND STATE ACTIONS

As of June 2021, the United States signed but has not yet ratified the Kigali Amendment, although President Biden has directed the State Department to prepare a ratification package for the Senate. Regardless, the U.S. will meet these same HFC reduction goals by implementing the American Innovation and Manufacturing (AIM) Act, enacted in December 2020. On May 19, 2021, EPA published its first proposed rule under the AIM Act, which establishes an allowance-based trading program. Manufacturers and retailers of products that contain HFCs, manufacturers and importers of HFCs, and entities that use HFCs in their equipment or processes can be affected by EPA's proposed rules.

Many states have already adopted the goals of the Kigali

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Amendment and have begun regulating HFCs with high global warming potential (high-GWP) in advance of any action by EPA - see the table below. For example, California has prohibited high-GWP HFCs in certain products since 2019. Several other states began the prohibitions as of 2021, and others are considering similar rules. California has also implemented a Refrigerant Management Program that requires leak detection and licensed service operators to conduct leak repair and other maintenance and refrigerant disposal activities for high-GWP HFCs.

EPA's PROPOSED HFC ALLOWANCE RULE

EPA's May 2021 proposed rule is the first step on the journey to reduce HFC production and consumption (i.e., generally manufacture and import) by 85 percent in 2036, consistent with the goals of the Kigali Amendment. The rule establishes an allowance trading system based largely on the GWP of the HFCs. The rule starts with a 10 percent reduction in 2022 and phases down from there. The rule establishes baselines for the phase-down, allowances and a scheme for allocating those allowances, new control requirements for the production of certain HFCs, rules on international trade, robust enforcement and compliance assurance provisions, and recordkeeping and reporting requirements. EPA plans to take a second step in January, 2022 and propose rules under the Significant New Alternative Policy (SNAP) Program to eliminate certain HFCs and identify alternatives.

EPA's current rule proposes that any company who produces any of the eighteen regulated HFC chemicals and their isomers—and almost all who import those chemicals—will need an allowance. This applies to a retailer that either (1) manufactures HFC chemicals, or (2) imports HFC chemicals in "bulk" (i.e., in containers for transportation or storage, prior to being transferred into a product or for some other useful purpose). These allowances can be obtained from EPA by ensuring EPA has certain information about a company's HFC production/imports, or by buying allowances from other companies that possess them. The proposed rules also allow EPA to add HFCs to the list.

A retailer that does not produce regulated HFC chemicals or import regulated bulk HFC chemicals can still be impacted by EPA's proposed rule if products containing those HFCs are sold or used in retail stores (e.g., for refrigeration or air-conditioning). Although allowances will not be required to purchase HFCs domestically, or to sell products containing HFCs, the product manufacturer or others in the supply chain will need an HFC allowance. The number of available allowances will gradually shrink over the lifetime of the program, which reduces the supply of HFCs for use in the U.S. and is expected to increase the price of HFCs and most products containing HFCs. As a result, the rule will complicate supply chains for certain products and almost all retail products that contain regulated HFCs—or that require the use of those HFCs in their manufacture—will become more expensive as the phase-down tightens. Currently, the rules are proposed through 2022 and will likely continue, but EPA is taking comment on the structure of the program beyond 2022.

EPA has proposed a key exception to the requirement that companies possess allowances in order to import HFCs. If a company imports regulated HFCs that are already "in a manufactured product," such as inside an appliance, aerosol can, foam, or other manufactured product, no import allowances would be required. EPA is likely to receive comments challenging its proposed exception for in-product imports of HFCs.

Another key exception, for at least the first five years of the phase-down (2022–2026), are certain "essential" products specifically designated by the statute to get access to as many HFCs as the industry needs. These essential product categories are metered-dose inhalers; defense sprays; certain foams; semi-conductors; and onboard aerospace fire suppression. Although manufacturers of other HFC-using products will need to obtain HFCs from a gradually dwindling supply, EPA proposes that the manufacturers of these essential products will receive special "application-specific" allowances that will have the effect of letting them obtain as many HFCs as they need without fear that supplies will run out.

¹ However, if the imported product contains HFCs manufactured in a country covered by the Kigali Amendment, it is likely the foreign country's laws will marginally increase the costs of those HFCs.

STATE APPROACHES

States have taken a different approach than EPA and are establishing deadlines by which certain products containing identified high-GWP HFCs will be prohibited. Generally, the regulations apply to specifically identified HFCs in aerosol propellants, chillers, refrigeration (including cold storage warehouses, household refrigerators and freezers, supermarket systems, remote condensing units, and vending machines), and foams. California prohibited some HFCs as early as 2019, but most other prohibitions take effect beginning 2021-2024 depending on the end use category (some limited exceptions apply). A retailer that may be subject to these requirements should carefully review the regulations, which typically contain a table listing the HFCs, type of products, and prohibition dates. Some states have disclosure, labeling, reporting, and/or recordkeeping requirements that apply to manufacturers. California also has a comprehensive refrigerant management program that applies to high-GWP HFCs to address leak detection and other maintenance of refrigeration equipment. Wisconsin also has a refrigerant management program that can apply to high-GWP HFCs and also include other ODS. The below table provides a list of the current state of the HFC regulations throughout the U.S.

ENFORCEMENT

EPA has been pursuing ODS violations with substantial penalties since at least 2013. In those cases, EPA sought penalties against retailers for failure to promptly repair leaks and maintain service records. In addition to penalties, EPA sought multi-million-dollar investments to improve and upgrade refrigeration systems. To the extent future EPA rules cover use of HFCs (which is expected), EPA is likely to enforce such rules on a similar scale as its enforcement of the ODS rules. California has also pursued similar types of cases while imposing significantly smaller penalties.

Most HFC phase-down prohibitions are new and states have not yet vigorously pursued enforcement. That may just be a matter of time. California, which has had its HFC regulations in place since 2019, has brought some enforcement actions,

including at least one case against a retailer for leak detection and one for violation of the state's regulations on small containers of R134a automotive refrigerant. Other states seem likely to pursue HFC prohibitions and leak detection requirements in an effort to meet climate commitments.

EPA has stated it fully intends to enforce its HFC Allowance rules. In addition to civil and criminal enforcement, the Agency has also proposed administrative consequences, such as revocation or retirement of allowances, to address violations.

WHAT TO EXPECT

States were already moving swiftly to regulate HFCs based on specific substances in specific end-uses, but primarily in the context of new or retrofit equipment. With the enactment of the AIM Act, the phase-down of HFCs will be nationwide and will make HFCs more scarce and costly in the coming years, without regard for how those HFCs are being used (unless eligible for a mandatory allowance under the statute). Product manufacturers are particularly impacted by the AIM Act in the near term, but retailers will be impacted by the costs involved in recharging their refrigeration and HVAC systems over time, even though rules promulgated under the AIM Act are not expected to directly require significant upgrades in capital equipment. In addition, The AIM Act authorizes EPA to promulgate "technology transfer" rules similar to those enacted by the states (primarily to replace the agency's rules under the Clean Air Act SNAP program that were largely struck down by a court decision as applied to HFCs)². These rules could come in a subsequent round of rulemaking.

Moreover, state laws impact end users, including retailers. States have been coordinating their GHG reduction efforts through the [United States Climate Alliance](#), a coalition of 25 states, many of which have already finalized or proposed HFC prohibitions. Additional refrigerant service and management requirements to reduce and repair leaking equipment can also be expected. Many of the federal regulations for appliances containing HFCs were rescinded

² *Mexichem Fluor, Inc. v. EPA*, 866 F.3d 451 (D.C. Cir. 2017) (vacating SNAP Rule 20); *Mexichem Fluor, Inc. v. EPA*, No. 17-1024 (D.C. Cir. Apr. 5, 2019) (vacating SNAP Rule 21)

³ See EPA's Revised Section 608 Refrigerant Management Regulations, <https://www.epa.gov/section608/revised-section-608-refrigerant-management-regulations>

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under the prior administration, but those rules are also reauthorized under the AIM Act and are expected to be revived in some form by EPA³.

STATE HFC LEGISLATION OR REGULATIONS (as of May 11, 2021)

CALIFORNIA HFC REGULATIONS

California's HFC regulations are the most comprehensive and have provided a guide to the other states.

Jurisdiction	Status of Regulation	Effective Dates	Products/Equipment Regulated	Summary of requirements
California	Final	2019-2021 depending on end use category	Food refrigeration, vending machines, cold storage warehouses, household refrigerators and freezers, foams, chillers, aerosols-propellants. Some limited exemptions apply.	<p>Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration, Chillers, Aerosols-Propellants, and Foam End-uses</p> <p>Administered by California Air Resources Board (CARB)</p> <p>Prohibits certain products containing specified high-GWP HFCs and for identified end uses from being sold, installed, or entered into commerce.</p>
California	Proposed	2022-2030 depending on end use category	Adds stationary air conditioning and ice rinks to above rule.	<p>Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration, Chillers, Aerosols-Propellants, and Foam End-uses</p> <p>Administered by CARB</p> <p>Adds lease & rent to the above prohibitions. Also adds additional requirements for manufacturers, including disclosure statement, labeling, and recordkeeping.</p>

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California	Final	2011	Stationary non-residential refrigeration, air conditioners, and any appliance that uses a high-GWP refrigerant	<p>Refrigerant Management Program (RMP)</p> <p>Regulation for the Management of High Global Warming Potential (GWP) Refrigerants for Stationary Sources.</p> <p>Administered by CARB</p> <p>Facilities with refrigeration systems containing more than 50 pounds of high-GWP refrigerant must register, conduct and report periodic leak inspections, promptly repair leaks, and keep service records on site. Service practices are also required to minimize emissions. Some requirements do not apply to certain appliances, including air conditioners.</p> <p>The regulation also affects persons that install, service, or dispose of appliances, including wholesalers, distributors, and reclaimers.</p>
California South Coast Air Quality Management District	Final	2011	Stationary, non-residential air conditioning systems	<p>Rule 1415 – Reduction of Refrigerant Emissions From Stationary Refrigeration Systems</p> <p>Administered by the California South Coast Air Quality District</p> <p>Equivalent to CARB's RMP and requires a registration plan to be filed with the District.</p>

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California	Final	January 1, 2010, amended April 13, 2017	Motor vehicle air conditioners in containers holding between 2 oz–2 lbs. of refrigerant.	Small Containers of Automotive Refrigerant Administered by CARB Retailers selling motor vehicle air conditions and companies that package, distribute, or market small cans of refrigerant must comply with labeling, recycling, education, and notification requirements. Self-sealing valves required on containers.
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OTHER STATE IMPLEMENTATION

The following states have implemented or are considering similar regulations (without the RMP).

Jurisdiction	Status	Legislation or Regulation
Colorado	Final	Colorado Greenhouse Gas Reporting and Emission Reduction Requirements Administered by the Colorado Department of Public Health and Environment
Connecticut	Governor's Order; regulations not yet developed	Order for the development of regulations to eliminate certain GHGs To be administered by the Connecticut Department of Energy and Environmental Protection
Delaware	Proposed Rules	Prohibitions on Use of Certain Hydrofluorocarbons in Specific End Uses Administered by Delaware Department of Natural Resources and Environmental
Hawaii	Legislation introduced	HB2492
Maine	Governor announcement; regulations not yet developed	Act to Restrict the Use of Hydrofluorocarbons To be administered by the Maine Department of Environmental Protection
Maryland	Final	HFC Prohibitions Administered by the Maryland Department of the Environment

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Massachusetts	Final	HFC Prohibitions Administered by the Massachusetts Department of Environmental Protection
New Jersey	Final legislation; regulations not yet in place	HFC Prohibitions Administered by the New Jersey Department of Environmental Protection
New Mexico	Rules planned with intent to finalize by end of 2021	2020 New Mexico Climate Strategy
New York	Final	Hydrofluorocarbon Standards and Reporting Administered by the New York Department of Environmental Conservation
Oregon	Proposed legislation	HB4024
Pennsylvania	Stakeholder meetings have begun	To be administered by the Pennsylvania Department of Environmental Protection
Rhode Island	Plans for rulemaking announced	Rhode Island Department of Environmental Management announcement
Texas	Legislation Introduced	SB125
Vermont	Final	Rules regarding the phase-down of the use of Hydrofluorocarbons Administered by the Vermont Department of Environmental Conservation
Virginia	Legislation Final; regulations not yet in place	HB30
Washington	Final	WAC 173-443 Hydrofluorocarbons Administered by the Washington Department of Ecology

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STATE REFRIGERANT MANAGEMENT PROGRAMS

Many states have Refrigerant Management Programs that cover CFCs and are consistent with the federal program. In addition to California, at least one other state has a Refrigerant Management Program that encompasses HFCs.

Jurisdiction	Status	Regulation
Wisconsin	Final	Wis. Adm. Code Section NR 488 Registration, certification, and training requirements for salvaging or dismantling refrigeration equipment and requirements on transport for recovery. Definition of "regulated refrigerant" includes HFCs.

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