

PROPOSED

State of California
AIR RESOURCES BOARD

PROPOSED AMENDMENTS TO PROHIBITIONS ON USE OF CERTAIN HYDROFLUOROCARBONS IN STATIONARY REFRIGERATION, CHILLERS, AEROSOLS- PROPELLANTS, AND FOAM END-USES REGULATION

Resolution 20-37

December 10, 2020

Agenda Item No.: 20-13-4

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the California Air Resources Board (CARB or Board) to adopt standards, rules and regulations and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, the Legislature enacted the California Global Warming Solutions Act of 2006, Assembly Bill 32 (AB 32, Nuñez, Stat. 2006, ch 488) in the Health and Safety Code section 38500 et seq., which declares global warming poses a serious threat to the economic well-being, public health, natural resources, and environment of California;

WHEREAS, section 38510 of the Health and Safety Code designates CARB as the state agency charged with monitoring and regulating sources of greenhouse gas (GHG) emissions that cause global warming in order to reduce such emissions to 1990 emission levels by 2020 and maintain a statewide GHG emissions limit, while seeking continuing GHG emissions reductions;

WHEREAS, section 38560 of the Health and Safety Code directs the Board to adopt rules and regulation in an open public process to achieve the maximum technologically feasible and cost-effective GHG emissions reduction from sources or categories of sources, subject to the criteria and schedules specified in Part 4 of Division 25.5 of the Health and Safety Code;

WHEREAS, section 38562 of the Health and Safety Code provides the Board with continuing authority to adopt additional regulations and revise existing regulations to further the provisions of Division 25.5 of the Health and Safety Code;

WHEREAS, the Legislature enacted Senate Bill 32 (SB 32, Pavley, Stat. 2016, ch. 249) at section 38566 of the Health and Safety Code requiring the Board to ensure that California's statewide GHG emissions are reduced to at least 40 percent below 1990 levels by 2030;

WHEREAS, section 38580 of the Health and Safety Code requires the Board to monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market based compliance mechanism adopted under Division 25.5 of the Health and Safety Code;

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize CARB to adopt standards, rules and regulations, and do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, sections 39515 and 39516 of the Health and Safety Code and Resolution 78-10 (February 23, 1978) specifies that the Board may delegate any duty to the Executive Officer and that any power, duty, purpose, function, or jurisdiction that may lawfully be delegated to the Executive Officer is conclusively presumed delegated unless specifically reserved by the Board by affirmative vote;

WHEREAS, section 41511 of the Health and Safety Code authorizes the Board to adopt rules and regulations to require the owner or operator of any air pollution emission source to take reasonable actions for the determination of the amount of such emission from such source;

WHEREAS, the Legislature enacted Senate Bill 605 (SB 605, Lara, Stat. 2014, ch. 523) adopting section 39730 of the Health and Safety Code, requiring the Board to identify measures to reduce short-lived climate pollutants (SLCPs);

WHEREAS, the Legislature enacted Senate Bill 1383 (SB 1383, Lara, Stat. 2016, ch. 395) in section 39730.5 of the Health and Safety Code, requiring California to reduce emissions of hydrofluorocarbons (HFCs) to 40 percent below 2013 levels by 2030, and requiring and further authorizing CARB to approve and begin implementing the Short-lived Climate Pollutant Strategy (SLCP Strategy) and the measures identified in the SLCP Strategy;

WHEREAS, CARB adopted its SLCP Strategy in March 2017, which identified reducing HFCs as an important part of SLCP reduction efforts and calls for a reduction in HFCs by 2030;

WHEREAS, CARB adopted a regulation, “Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration and Foam End-Uses” (Current HFC Regulation) in 2018 to incorporate certain prohibitions on stationary refrigeration and foam end-uses from the United States Environmental Protection Agency (U.S. EPA) Significant New Alternatives Policy Program, Rules 20 and 21, into state law to prevent industry backsliding in California;

WHEREAS, in 2018, the California Legislature adopted the California Cooling Act (SB 1013, Lara, Stat. 2018, ch. 375), which incorporated SNAP Rules 20 and 21 in their entirety into Health and Safety Code section 39734;

WHEREAS, in 2019, CARB followed an administrative process to incorporate the SB 1013 provisions into the existing HFC Regulation and retitled it “Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration, Chillers, Aerosols-Propellants, and Foam End-Uses Regulation” to be reflective of all end-uses;

WHEREAS, HFCs are synthetic fluorinated gases (F-gases) containing hydrogen, fluorine, and carbon, that are used in a variety of applications, including refrigeration, air-conditioning, foam blowing, solvents, aerosols, and fire suppression;

WHEREAS, HFCs are the fastest growing source of GHG emissions in California and the world and are the primary substitutes for ozone-depleting substances, such as chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), which are being phased-out under the Montreal Protocol;

WHEREAS, HFCs are powerful climate forcers that remain in the atmosphere for a much shorter period of time than longer-lived climate pollutants, such as carbon dioxide, but are more potent when measured in terms of global warming potential (GWP), which can be hundreds, or even thousands of times greater than carbon dioxide;

WHEREAS, the Intergovernmental Panel on Climate Change 2018 Special Report, Global Warming of 1.5 degrees C, predicts we will experience the impacts of climate change sooner than previously thought and that we need to take action now;

WHEREAS, the Fourth National Climate Assessment Report finds we are already experiencing the effects of climate change and that climate change exacerbates existing vulnerabilities in communities across the United States, presenting growing challenges to human health and safety, quality of life, and the rate of economic growth;

WHEREAS, section 38501(e) of the Health and Safety Code specifies that by “exercising a global leadership role, California will also position its economy, technology centers, financial institutions, and businesses to benefit from national and international efforts to reduce emissions of greenhouse gases;”

WHEREAS, stationary refrigeration and air conditioning are the largest sources of HFC emissions in California and have very high GWP values;

WHEREAS, stationary refrigeration systems with over 50 pounds of refrigerant have the highest annual emissions rates out all HFC end-uses;

WHEREAS, further reductions are needed to achieve the SB 1383, AB 32, and SB 32 emissions reductions targets for 2030;

WHEREAS, achieving carbon neutrality by 2045 requires ambitious near-term actions to deploy energy efficiency, transportation and building electrification, zero-carbon electricity, and reductions in non-energy, non-combustion GHG emissions, including HFCs;

WHEREAS, CARB uses the Social Cost of Carbon to estimate the avoided damages from GHG emissions, which provides a monetary benefit today of reducing carbon emissions in the future;

WHEREAS, there are currently no restrictions on high-GWP refrigerants in stationary air conditioning in California, but alternative refrigerants with lower-GWP values are technically feasible and available;

WHEREAS, CARB staff has proposed amendments to the current HFC Regulation, including renaming it "Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration, Stationary Air-conditioning, and Other End-Uses," as set forth in Appendix A to the Initial Statement of Reasons (ISOR or Staff Report) released to the public on October 20, 2020;

WHEREAS, CARB staff has released to the public on October 20, 2020, the air conditioning manufacturers' and other stakeholders' proposals for achieving needed emissions reductions through use of refrigerant reclaim in new equipment, servicing existing equipment, refrigerant destruction, via a refrigerant reclaim offset program, as outlined in Appendix D to the ISOR. Any substantive revisions to Appendix A may be incorporated through the process of a 15-day Notice and will be an outgrowth of these proposals;

WHEREAS, the ISOR presents, among other things, the rationale and basis for the proposed amendments, as set forth in Appendix A to the ISOR released to the public on October 20, 2020, and identifies the data, reports, and information relied upon for the proposed amendments;

WHEREAS, the proposed amendments would place GWP limits on the refrigerants used in stationary refrigeration and air conditioning end-uses and include the following elements:

Establishes a GWP limit of 150 for new stationary refrigeration systems containing more than 50 pounds of refrigerant for newly constructed and fully remodeled facilities, effective 2022;

Requires existing companies owning or operating 20 or more retail food facilities in California, and national supermarket chains operating in California, to reduce their company-wide, weighted-average GWP for all refrigeration systems containing more than 50 pounds of refrigerant to less than 1,400 GWP or achieve a 55 percent or greater reduction in their GHG potential below 2019 levels by 2030 with a progress step in 2026;

Requires existing companies owning or operating fewer than 20 retail food facilities in California to reduce their company-wide, weighted-average GWP for all refrigeration systems containing more than 50 pounds of refrigerant to less than 1,400 GWP by 2030 or achieve a 55 percent or greater reduction in their GHG potential below 2019 levels by 2030;

Establishes a GWP limit of 2,200 for new refrigeration systems containing more than 50 pounds of refrigerant excluding chillers for existing industrial process refrigeration facilities, effective 2022;

Establishes GWP limits for new chillers used for industrial process refrigeration in newly constructed, fully remodeled and existing facilities ranging from 750 to 2,200 depending on minimum evaporator temperature, effective 2024;

Establishes a GWP limit of 750 for new chillers used for air conditioning, effective 2024;

Establishes a GWP limit of 150 for new refrigeration systems containing more than 50 pounds of refrigerant and new chillers in new ice rinks, effective 2024;

Establishes a GWP limit of 750 for new refrigeration systems containing more than 50 pounds of refrigerant and new chillers in existing ice rinks, effective 2024;

Establishes a GWP limit of 750 for new room air conditioning equipment and dehumidifiers effective 2023, for new residential and commercial stationary air conditioning equipment effective 2025 and effective 2026 for air conditioning equipment that are variable refrigerant flow or variable refrigerant volume systems;

Establishes requirement for a minimum use of reclaimed refrigerant in an amount equal to 10 percent of the amount of R-410A that enters California in new equipment in 2023 and 2024. This requirement will not apply to room air conditioning equipment and dehumidifiers.

Adds labeling and recordkeeping for refrigeration, air conditioning, and chillers as well as some registration and reporting requirements for retail food facilities;

Establishes a variance process to address impossibility and force majeure events;

Adds definitions to clarify the applicability of the existing regulation and modifies existing definitions to conform to existing U.S. EPA definitions; and

Makes non-substantive changes to improve and clarify the regulation;

WHEREAS, the proposed amendments aims to reduce the impacts of climate change, which are expected to exacerbate or create environmental injustice and there are no known negative environmental justice impacts that have been identified with regard to the proposed amendments;

WHEREAS, reductions of SLCPs have important public health benefits in communities (including disadvantaged communities) affected by climate change;

WHEREAS, the HFC regulations already in place in California, though not sufficient to control all HFC emissions, demonstrate that effective regulation of the industry can substantially and effectively control emissions;

WHEREAS, CARB staff estimates that the proposed amendments would reduce HFC emissions by the equivalent of approximately 3.2 million metric tons of carbon dioxide equivalent (MMTCO₂e) per year by 2030 and 62 MMTCO₂e cumulatively by 2040;

WHEREAS, CARB staff estimates that the total benefits in avoided harms from reducing HFC emissions as between \$1.7 billion to \$7.2 billion through 2040, using the Social Cost of Carbon;

WHEREAS, CARB staff conducted public workshops, teleconferences, and numerous in-person meetings with stakeholders during the regulatory development process;

WHEREAS, the proposed amendments and Staff Report for the proposed amendments have been circulated and made available for public comment for at least 45 days, including the proposal for the alternative air conditioning compliance pathway;

WHEREAS, the proposed amendments are not expected to have a significant adverse economic impact on businesses or the creation or elimination of jobs;

WHEREAS, the California Environmental Quality Act (CEQA), Public Resources Code, section 21000, et seq., requires that state agencies consider the environmental impact of their discretionary decisions, including the adoption of regulations;

WHEREAS, CARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA; Cal. Code Regs., tit. 14, § 15251(d)), and CARB conducts its CEQA review according to this certified program (Cal. Code Regs., tit. 17, §§ 60000-60007);

WHEREAS, CARB staff has determined the proposed amendments are exempt from CEQA under the "Class 8" exemption for "Actions Taken by Regulatory Agencies for Protection of the Environment" (Cal. Code Regs, tit. 14 § 15308) because the record evidence shows that the proposed amendments will enhance the environment by better protecting the public from health impacts associated with climate change. The proposed amendments are also categorically exempt from CEQA under the "Class 1" exemption for the operation, repair, maintenance, permitting, leasing, licensing, or minor alteration of existing public or private structures or facilities involving negligible or no expansion of use (Cal. Code Regs., tit. 14, § 15301) and "Class 2" exemption for replacement or reconstruction of existing structures and facilities (Cal. Code Regs., tit. 14 § 15302). The proposed amendments will not result in any significant adverse environmental impacts and none of the exceptions to these exemptions applies, as described in Chapter VI of the Staff Report;

WHEREAS, the Board has considered the analysis of the economic impact of the proposed amendments as identified in the Significant Regulatory Impact Analysis (SRIA);

WHEREAS, a public hearing, public comment period, and other administrative proceedings have been held according to the provisions of the Administrative Procedures Act, Chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code;

WHEREAS, the Board finds that:

The proposed amendments enhance California's leadership on climate issues and demonstrates that subnational jurisdictions can take important action to reduce HFC emissions;

The proposed amendments contain elements to ensure successful and orderly transition to lower-GWP refrigerants and is not only appropriate but necessary to meeting California's climate goals by reducing HFC emissions as prescribed by legislation;

The proposed amendments meet the statutory requirements that CARB monitor and regulate sources of GHG emissions that cause global warming in order to reduce such emissions to 1990 emission levels by 2020, reduce emission levels to 40 percent below 1990 by 2030, maintain the GHG emissions

reductions, and continue to seek reduction as identified in sections 38510, 38560, 38562, and 38566 of the Health and Safety Code;

The proposed amendments meet the statutory requirements that the Board monitor compliance with and enforce any rule, regulation, order, emission limitation, emissions reduction measure, or market based compliance mechanism adopted under Division 25.5, section 38580 of the Health and Safety Code;

The proposed amendments meet the statutory requirements for California to identify measures to reduce SLCPs and begin implementing the SLCP Strategy as identified in sections 39730 and 39730.5 of the Health and Safety Code;

The proposed amendments meets the statutory directive for California to begin implementing measures identified in the SLCP Strategy and reduce HFC emissions by 40 percent below 2013 levels by 2030, as identified in section 39730.5 of the Health and Safety Code;

The proposed amendments meet the statutory requirement that the Board adopt rules and regulations to require the owner or operator of any pollution emission source to take reasonable actions for the determination of the amount of such emission from such source as identified in section 41511 of the Health and Safety Code;

The proposed amendments are estimated to reduce HFC emissions by approximately 3.2 MMTCO₂e per year by 2030 and 62 MMTCO₂e by 2040;

The proposed amendments have a total benefit of \$1.7 billion to \$7.2 billion through 2040 estimated using the Social Cost of Carbon;

The proposed 15-day change is an appropriate additional compliance pathway for air conditioner manufacturers and CARB staff will work with stakeholders;

The proposed amendments were developed in an open public process, in consultation with affected parties, through numerous public workshops, individual meetings, and other outreach efforts, and these efforts are expected to continue;

The proposed amendments are not expected to have a significant statewide adverse economic impact that would directly affect businesses, including the ability of California businesses to compete with businesses in other states, or on represented private persons, or the creation or elimination of jobs;

No reasonable alternatives to the proposed amendments considered to date, or that have otherwise been identified and brought to the attention of CARB,

would be more effective at carrying out the purpose for which the regulation is proposed or would be as effective and less burdensome to affected entities or would be more cost-effective and equally effective in implementing the statutory policy or other provision of law, considering, among other things, the standardized regulatory impact analysis of the proposed amendments and the specific benefits of the proposed amendments that were identified in the Notice of this action;

The proposed amendments are consistent with CARB's environmental justice policies and do not disproportionately impact people of any race, culture, income, or national origin; and

The proposed amendments are exempt from CEQA under California Code of Regulations, title 14, sections 15301, 15302, and 15308 because substantial evidence in the record shows that it will enhance the environment by better protecting the public from health impacts associated with climate change, the regulatory process involves procedures for protection of the environment, and the proposal will not result in any significant adverse environmental impacts.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves for adoption amendments to sections 95371, 95372, 95373, 95374, 95375, 95376, and 95377, Article 4, Subarticle 5, Chapter 1, Division 3, Title 17, California Code of Regulations, as set forth in Appendix A of the ISOR released to the public on October 20, 2020.

BE IT FURTHER RESOLVED that the proposed regulatory text may be further revised with grammatical or other non-substantial changes, which will be added to the rulemaking record and indicated as such.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to determine if additional conforming modifications to the regulation are appropriate, including the proposed 15-day changes referenced above. If no additional modifications are appropriate, the Executive Officer shall take final action to adopt the regulation, as set forth in Appendix A, of the ISOR released to the public on October 20, 2020, through submittal of the Board-approved rulemaking package to the Office of Administrative Law. If the Executive Officer determines that additional conforming modifications are appropriate, the modified regulatory language shall be made available for public comment, with any additional supporting documents and information. The Executive Officer shall consider written comments submitted during the public review period and make any further modifications that are appropriate available for public comment for at least 15 days. The Executive Officer may present the regulation to the Board for further consideration, if warranted, and if the Executive Officer determines further consideration by the Board is not warranted, the Board delegates to the Executive Officer authority to take final action to adopt the regulation, including all appropriate conforming modifications.

BE IT FURTHER RESOLVED that if there is a possibility that any modifications to the regulation made available for one or more 15-day public comment periods may affect the conclusion of the Environmental Analysis, the Executive Officer shall prepare and circulate any additional Environmental Analysis to the extent required by CARB's regulations at Title 17, California Code of Regulations, section 60000-60005 and prepare written responses to any comments received raising significant environmental issues as necessary, to present to the Board for approval along with the final regulations.

BE IT FURTHER RESOLVED that the Board directs the Executive Officer to finalize the Final Statement of Reasons, submit the completed rulemaking package to the Office of Administrative Law, and transmit the Notice of Exemption to the Secretary of the Natural Resources Agency for posting.