Honeywell

November 24, 2020

California Air Resources Board
1001 I Street
Sacramento, California 95814

*Via electronic submission: https://www.arb.ca.gov/lispub/comm/bclist.php*

**Re: Comments by Honeywell International Inc. on Proposed Amendments To The Prohibitions On Use Of Certain Hydrofluorocarbons In Stationary Refrigeration, Chillers, Aerosols Propellants, And Foam End-Uses Regulation**

Dear Board Members and Staff,

On behalf of Honeywell International Inc. (Honeywell), thank you for the opportunity to submit these written comments on the proposed regulatory amendments (Proposed Regulation) to further reduce emissions of high-global warming potential (GWP) hydrofluorocarbons (HFCs) from stationary refrigeration and air conditioning (AC) equipment.

Honeywell is a global leader in providing energy efficient technologies and innovations that can help the world solve its energy and environmental challenges. Our Fluorine Products business is a recognized leading innovator in the development of environmentally preferable fluorocarbons for use as refrigerants, foam blowing agents, solvents, aerosol propellants, and other uses. Since the 1990s, we have helped businesses replace ozone-depleting substances in these applications with alternatives that have less impact on the stratospheric ozone layer and global climate change.

We are proud to continue our support for California Air Resources Board's (CARB's) efforts to implement its Short-Lived Climate Pollutant (SLCP) Strategy in furtherance of achieving California's mandated 40 percent reduction in HFC emissions from 2013 levels by 2030, required by Senate Bill 1383. We strongly support the objective of the Proposed Regulation, which would reduce emissions from stationary refrigeration and AC equipment and offer the following comments and recommended changes that would ensure the proposed equipment prohibitions are comprehensive and fully achievable.

Air Conditioning Equipment

The Proposed Regulation would set a January 1, 2023 effective date for its prohibition on new residential and non-residential air conditioning equipment that use refrigerants with a GWP of 750 or greater. While Honeywell strongly supports the proposed prohibition, we are concerned that January 1, 2023 is too soon for a technical transition. As background, we are working closely with 15 different equipment manufacturers to test and scale new lower GWP A1 refrigerants in new equipment designs.

To allow adequate lead time for this equipment, **we support efforts to set the transition date to January 1, 2025**. This slight delay will enable the availability of different refrigerant alternatives and provide time for a successful transition in the California market.

"A1" refrigerants are nonflammable and can be used safely in homes. On the other hand, "A2L" or mildly flammable refrigerants are not approved at this time by the Uniform Mechanical Code (UMC) for direct AC applications due to the need to address safety mitigation concerns surrounding the use of such refrigerants in homes. One concern is that without the right safeguards in place, an A2L refrigerant in a home could increase the risk of a fire or exacerbate the impact of fires started through other sources.

There is currently an active discussion about building codes and equipment standards that will determine how to move forward on use of A2L refrigerants in residential AC equipment. As a manufacturer of both nonflammable and flammable refrigerants, Honeywell has always actively participated and advocated for safe practices. While Honeywell favors a nonflammable solution for homes because it is intrinsically safe, should the industry ultimately move forward with a flammable solution, Honeywell is supportive if safety standards and building codes are updated to protect homeowners, first responders and other impacted stakeholders. New mitigation equipment will need to be designed to manage flammability, and updated standards will need to be put in place to ensure reliable performance of the new mitigation equipment.

These standards also need to be fully vetted by all stakeholders, including equipment builders, fire services personnel, technicians and channel partners. Further, any changes in codes will have to be accompanied by an extensive, robust education and training program for thousands of contractors and first responders, as well as awareness campaigns for consumers on the higher risks related to A2L refrigerant in their homes. Once this work is complete, and should the codes and standards bodies determine that A2L refrigerants can be used safely, the standards can be responsibly adopted into new building codes. Any shortcut of these measures or the process overall will create undue risk.

Honeywell supports a transition date of January 1, 2025 as that would allow industry sufficient time to complete development, testing, launch and training (if A2L) of compliant alternatives.

<u>Commercial Refrigeration</u>

Honeywell believes that the fastest way to reduce greenhouse gas emissions would be to accelerate the transition timeline for the retail food company-wide, weighted average GWP requirement of 1400 / 55% reduction from what has been proposed.

We encourage CARB to adopt earlier transition dates for all the categories. Instead of 2026 and 2030, CARB should set the transition dates at 2024 and 2026, respectively, and consider applying an interim compliance deadline to all companies, rather than only those owning or operating 20 or more retail food facilities. Honeywell estimates that this could reduce cumulative $CO_2e$ emissions between 2022 and 2030 by approximately 1.5 $MMTCO_2e$, which would more than offset the impact of delaying the residential prohibition from January 1, 2023 to January 1, 2025 that we estimate to be around 0.4 MMTCO2e.

There is simply no reason to delay the transition for commercial refrigeration since there are multiple lower-GWP alternatives available as well commercially available compatible refrigeration systems and equipment. The US EPA SNAP website shows the comprehensive list of approved substitutes, many of which are commercially available and in use today.

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Thank you for the opportunity to submit these comments on the Proposed Regulation.

Sincerely,

DocuSigned by:
Sanjeev Rastogi
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Sanjeev Rastogi
Vice President & General Manager
Fluorine Products
Honeywell Performance Materials & Technologies