JMC Japan Machinery Center for Trade and Investment

January 30th, 2023

EPA Docket Center
docket identification number EPA–HQ–OAR–2021–0643
U.S. Environmental Protection Agency
1200 Pennsylvania Avenue
NW, Washington, DC 20460.

Dear Sirs,

Our comments on Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons under the American Innovation and Manufacturing Act

The Japan Machinery Center for Trade and Investment ("**JMC**") is a non-profit organization. It was established in December 1952 in accordance with the Japanese Export and Import Trade Law under the authorization of the Minister of Economy, Trade and Industry of Japan. The objective of the JMC is to engage in activities that enhance the common benefit of member companies and promote the sound development of international trade and investment by the machinery industry. JMC comprises member companies engaged in machinery and systems-related exports and foreign investments such as machinery manufacturers, trading houses and engineering companies. At present, the total number of JMC member companies is about 240.

Our committee handles environmental and product safety issues regarding products for trade and is strongly concerned with overseas environment- and product safety-related regulations on products. From this standpoint, we would like to comment on Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons under the American Innovation and Manufacturing Act.

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If you have any questions, please feel free to contact our secretariat (Mr. Chiaki Morikawa, E-mail: morikawa@jmcti.or.jp)).

Sincerely yours,

Chairman
Environment Law Committee

JMC Japan Machinery Center for Trade and Investment

Our comments on "Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons under the American Innovation and Manufacturing Act"

We, Japan Machinery Center for Trade and Investment (JMC), would like to express our gratitude to the U.S. Environmental Protection Agency for inviting comments regarding "Phasedown of Hydrofluorocarbons: Restrictions on the Use of Certain Hydrofluorocarbons under the American Innovation and Manufacturing Act"
https://www.federalregister.gov/documents/2022/12/15/2022-26981/phasedown-of-hydrofluorocarbons-restrictions-on-the-use-of-certain-hydrofluorocarbons-under

We welcome the proposed regulation as an essential measure to reduce HFCs, which have a high global warming potential, and to protect people and the global environment. As a JMC whose members include machinery and electrical and electronic product manufacturers, we have been working diligently toward the complete elimination of HFCs. In this context, we have faced challenges in the alternative use of construction and mining equipment and we would submit the following comments on the regulation.

1. Extensions of the grace period for switching to hydrofluoroolefins (HFOs)

We would like to request a change in the switchover date to HFO-based CFCs from MY2026 to MY2032 in the proposed regulation.

2. Application of exemptions

(1) We would like to request an indefinite exemption (Full Exemption) for mining equipment, as it is used in harsher conditions than construction equipment. Alternatively, we would like to request an exemption until non-flammable refrigerants are available as an alternative substance.
(2) We would like to request an indefinite Full Exemption for vehicles with low production volumes by controlling the number of units.
(3) As many long-life vehicles remain on the market for construction and mining equipment, we would like to request that the HFC-134a supply network remains for the maintenance service of existing vehicles.

Background

(1) Use of HFC-134a in products

HFC-based CFCs are used in a variety of products, including construction machinery and other vehicles, air conditioners, and refrigerators. Because HFCs have a high global warming potential but are non-flammable, they are used worldwide in many products. The switchover from HFC-134a to HFO-1234yf has been fully investigated technically, but is still in the process of being implemented. However, in order to enable the use of HFO-1234yf in current and newly developed models, it is necessary not only to change the design, but also to prepare production facilities and service systems at customer sites, which requires a great deal of time.

Nevertheless, there is an urgent need in the industry to switch to refrigerants with a low global warming potential in order to tackle the problem of global warming, and manufacturers are working hard to achieve this.

(2) Risks posed by the mild flammability of HFO-1234yf and the time frame for addressing these risks

HFC-134a has a high global warming potential, while the alternative CFC, HFO-1234yf, has a low global warming potential but is mildly flammable. Therefore, there is a risk of vehicle fire when switching over. In switching over, a lot of time is necessary to change the design for the following reasons, and it is not feasible to comply by MY2026.

We believe that it is desirable for the market to postpone until MY2032 due to technical measures to prevent high temperatures around the engines of Heavy-duty vehicles.

Reasons

1) Risk assessments are carried out for each product and model, which requires a lot of time for design changes.
2) Many off-road (non-road) vehicles, such as construction equipment, operate in high-risk environments, such as when handling dust, powder, and other materials that can easily ignite. Vehicle fires are therefore more likely to occur compared with on-road vehicles.
3) As construction machinery is used in a wide variety of ways, the number of models to deal with, such as design changes, is large, although the production volume is small. Therefore, a lot of time is needed to respond to all models.
4) Mining equipment is sometimes used in enclosed spaces with high flammability, such as underground mines, so it is necessary to take measures, including for facilities, which are stipulated in a separate regulation (MSHA). Failure to meet the deadlines would have significant consequences for users.

(3) Securing the distribution of HFC-134a

As many vehicles using HFC-134a will remain on the market and many vehicles and products will be affected if distribution is completely discontinued, it is necessary to secure the supply network. Many more design changes would be required to accommodate existing vehicles and products as well.

3. Conclusion

As mentioned above, it is recognized that HFC-134a is widely used in many countries and industries because of its unique and stable performance, ensuring the safety of each product. Therefore, it is requested that due consideration be given to the fact that a lot of time will be required for design changes to ensure safety when switching to HFO-1234yf and that, with regard to mining equipment, it may no longer be possible to ensure safety.

End