Honeywell
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May 31, 2018

Ms. Sarah Carter
Air Resources Board
9480 Telstar Ave, Suite 4
El Monte, California 91731
Via online submission

RE: Comments by Honeywell International Inc. on Request for Public Input on Potential Alternative to a Potential Clarification of the "Deemed to Comply" Provision for the LEV III Greenhouse Gas Emission Regulations for Model Years Affected by Pending Federal Rulemakings

Dear Ms. Carter,

On May 7, 2018, the California Air Resources Board (ARB) issued a notice inviting "Public Input on Potential Alternative to a Potential Clarification of the "Deemed to Comply" Provision for the LEV III Greenhouse Gas Emission Regulations for Model Years Affected by Pending Federal Rulemakings." Honeywell International Inc. ("Honeywell") appreciates the opportunity to provide input. Honeywell manufactures a low-global-warming-potential (GWP) refrigerant alternative for new mobile air-conditioning (MAC) systems that is eligible for credit towards compliance in both the existing federal EPA and ARB vehicle greenhouse gas (GHG) emissions regulations. The gram-per-mile credit offered to automakers who adopt low-GWP refrigerant alternatives has been a significant enabler of the transition away from high-GWP hydrofluorocarbon (HFC) refrigerants.

Honeywell supports ARB's efforts to clarify that the "deemed to comply" provision of its regulations applies to the currently adopted EPA standards as they existed on May 7, 2018, the date of the notice. Doing so would provide certainty for automakers and suppliers serving the California market if EPA significantly changes the federal standards or eliminates the availability of credits, such as the MAC credits.

As finalized in US EPA's 2017 and Later Model Year Light-Duty Vehicle GHG Emissions and Corporate Average Fuel Economy Standards,[1] the MAC credit program offers credits that recognize the environmental benefits of eliminating direct emissions of GHG by reducing the leakage of air-conditioning (A/C) refrigerants[2] and credits for the indirect emission reductions associated with improving the efficiency of the A/C system.[3] Honeywell's alternative refrigerants, with their low GWP value, along with leakage prevention hardware, are leading the transition toward the elimination of direct GHG emissions from A/C system leakage.

The transition to HFC alternatives in mobile air-conditioning is well underway owing in significant part to the availability of MAC credits. By the end of 2018, there will be about 20 million vehicles on the road in the U.S. using HFO-1234yf, yielding an emissions reduction of nearly 1 million metric tons CO_2e per year. Without regulatory certainty, the transition of California's fleet to low-GWP mobile A/C solutions could back slide, increasing greenhouse gas emissions in California.

[1] 77 Fed. Reg. 62624 (Oct. 15, 2012).
[2] 40 CFR § 86.1867-12(b).
[3] 40 CFR § 86.1867-12(c).

The MAC credit system has been highly effective in motivating automakers to end the use of HFC-134a in new vehicle production:

- All Tier 1 suppliers of A/C system hardware to the auto industry currently offer cost competitive A/C systems to accommodate alternatives to HFC-134a like HFO-1234yf. The U.S.-based car companies, including Ford, GM, and Fiat Chrysler (FCA), have already converted more than 80% of their production to HFO-1234yf.

- Ford, General Motors, and FCA are already selling more than 55 models using HFO-1234yf including in high-volume models such as the Ford F-150 pickup, Focus, Fusion, the Jeep Wrangler, Grand Cherokee, Ram pickup trucks, Chevy Malibu, Equinox and Silverado pickup truck. Virtually all FCA and GM models were converted to HFO-1234yf for MY17. In total, 10 million new MY18 cars using HFO-1234yf will be sold to owners in the U.S., representing about 60% of the total market.

- The EPA has already approved HFO-1234yf, HFC-152a, and CO_2 (R-744) for motor vehicle air-conditioning systems, which are all eligible for the MAC credit, and low-GWP motor vehicle systems are currently in widespread use in the U.S. and Europe.

- Production capacity was significantly expanded for HFO-1234yf in the last few years around the world. In 2017, Honeywell started up its new world-scale production facility in Louisiana and another producer has announced plans to start up another world-scale plant in Texas later this year.

- HFO-1234yf also has no measurable energy efficiency difference compared to HFC-134a systems. To the contrary, auto manufacturers that have tested and used HFO-1234yf in their vehicles have found that systems designed for the properties of HFO-1234yf are at least as efficient as those using HFC-134a, and in some cases systems HFO-1234yf systems were found to be more efficient.

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 appreciate this opportunity to provide comment and strongly support ARB's proposal to further clarify that the "deemed to comply" provision applies to today's federal standards.

Sincerely,

DocuSigned by:
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Sanjeev Rastogi
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