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August 18, 2021

Ms. Elizabeth Scheele
Division Chief
California Air Resources Board
1001 I Street
PO Box 2815
Sacramento, CA 95812
(Submitted electronically)

Re: Comments Regarding California Air Resources Board Second Draft Fifteen-day Proposed Amendments to the Prohibitions on Use of Certain Hydrofluorocarbons in Stationary Refrigeration, Chillers, Aerosols-Propellants and Foam End-Uses Regulation

Dear Ms. Scheele:

We appreciate the opportunity to provide the following comments to California Air Resources Board (CARB) as it considers regulations on the use of reclaimed R410A for HVAC in 2023 and 2024. We support the phase down of high GWP HFCs. We also encourage CARB to reconsider its definition of new equipment and its rule to require a 150 GWP limit for ice rinks in 2024.

Trane Technologies (Trane) is a climate company with well-known brands such as Trane and Thermo King, which are global leaders in stationary and transport air conditioning and transport refrigeration products. Trane Technologies is well known for its global leadership in transitioning away from today's high global warming potential (GWP) refrigerants. Trane began transitioning its global high-performance chiller portfolio in 2015 and Thermo King began transitioning its EU transport refrigeration products in 2014, long before regulations began taking shape.

Trane commits to reduce our customer's emissions by one gigaton (1 billion tons) CO_2e by 2030. Transitioning away from high GWP HFCs with highly efficient products will help us meet this goal.

Trane is a member of the Air Conditioning, Heating and Refrigeration Institute (AHRI) and agrees with its comments on this matter. Additional comments are listed below.

We appreciate the allowance of reclaimed R-410A in existing equipment, which provides the flexibility necessary to make a reclaim program a success.

The Amended Language did not Provide for Early Action Credit for the use of Reclaimed R-410A prior to 2023 even though equipment under 7570 GWP would not be allowed in CA prior to mid-2024.

We appreciate the desire to commercialize next generation low GWP refrigerants in the stationary HVAC space prior to 2025, but the CA building codes will not allow this until July 2024, leaving little or no room for actual early action credit. We propose that the credit include the use of reclaimed R-410A in new or existing equipment prior to 2023. As it stands, the mandatory use of reclaim only spans for two and a half years. Furthermore, the industry did not start using R-410A in any significant way until 2010, making supply constrained because the original equipment is still within its expected life span. Adding another year and a half would further bolster the reclaiming industry and allow for more of a ramp up to 2023.

The Proposed Definition for New Air-conditioning Equipment Requires All New Exterior Condensers to be less than 750 GWP, which Creates Hardship for Small Businesses.

Commercial splits are commonly repaired by replacing outdoor units only. The proposed definition would eliminate this common practice and force replacement of entire systems, prior to the end of the unit's life, creating stranded assets and unnecessary costs for small business owners. Commercial splits typically contain twenty-five or more pounds of refrigerant and comprise a small portion of the overall HVAC market.

We respectfully request modifying the proposed definition as follows:

"New Air-conditioning Equipment" means any air-conditioning equipment or system that is one of the following:

(1) First installed using new components, used components, or a combination of new or used components; or
(2) An existing system with **less than twenty-five pounds of refrigerant in** a single condenser and single evaporator that has a new exterior condenser, condensing unit, or remote condensing unit; or

A 150 GWP Limit for Chillers in New Ice Rinks Introduces Safety Risks and Could Increase Emissions Through Efficiency Loss.

The only proven technology that complies with a 150 GWP limit for chillers in new ice rinks involves the use of ammonia, which is not widely used or allowed in ice rinks and HVAC today due to safety concerns. While it might be feasible to implement a CO_2 system, the reduced efficiency due to high ambient temperatures more than offsets any CO_2e emission reduction gains

from the lower GWP. As we stated in our prior comments, a 750 GWP would allow for lower GWP, high efficiency systems to be implemented without increasing safety concerns.

Please contact me directly to discuss further.

Sincerely,

Nanette Lockwood

Nanette Lockwood
Sr. Director Climate Policy and Advocacy
Trane Technologies