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California Air Resources Board

CARB

**Re: DRAFT - Hussmann Corporation Comments California SB 1206 Assessment Report for Transitioning HFC’s to Ultra-Low and/or No GWP**

To: California Air Resources Board Team:

These comments are submitted by Hussmann Corporation in response to the SB 1206 Assessment Report Request for Information.

Hussmann, a North American leader in providing display merchandisers, refrigeration systems, installation and services to food retailers around the world would first like to thank CARB staff for the time, effort and open communication with OEMs and retailers necessary to develop a better understanding around transitioning to ultra-low GWP. Hussmann, a member of AHRI, NAFEM, NASRC and other trade groups, has worked diligently with states such as California, Washington, and New York as well as the EPA with the development of regulation to phase down higher GWP refrigerants and transition to lower GWP technologies. Hussmann has supported both the development of AIM as well as the signing of the Kigali Amendment and we realize the importance and significance of a national regulatory framework.

The Hussmann comments below address key areas of concern for what we believe to be necessary for a successful transition to low GWP systems for both OEM’s and retailers.

**Hussmann requests that CARB make every effort to strongly consider and align where possible with the EPA American Innovation in Manufacturing (AIM) Act Subsection H Management of Regulated Substances.**

**Section 1: Commercial and Industrial Stationary Refrigeration**

**1. What potential technological solutions are available for existing facilities and how can their adoption be accelerated?** Existing facilities have made large financial investments in their refrigeration systems. These systems have a lifetime of 20-25 years or more. While there are no refrigerant retrofit options that would be considered “ultra-low GWP” it must be recognized that existing systems still using ODP refrigerants (R-22) and higher GWP HFC substitutes (R-404A as an example) will provide a tremendous environmental benefit by transitioning to low GWP blends (R-448A/R-449A as examples) reducing the GHGp by 65%. When retrofitting retailers not only replace worn components but they also tighten up the system prior to charging, reducing the potential for leaks. Retailers need the assurance that these retrofit blends, with GWP near 1400, will be available for the remaining life of the system. Advanced leak detection tools are available which notify the retailer of potential leaks prior to significant refrigerant loss.

**2. What incentives are needed to transition existing refrigeration facilities and what GWP limit should be set for technologies supported through incentives?** Alternative low-GWP systems, which will be used for new development, are not a simple or cost-effective solution for most retailer existing facilities. Due to the low-GWP requirements under the AIM Technology Transition the refrigerants used in these low-GWP systems are not compatible with existing systems. To transition a retailer would need to not only replace the rack/high-side of the system but also all piping and display cases/evaporative unit coolers. In most scenarios the facility would need to be closed while this full transition takes place. The wholesale replacement of compressor, condenser, display case and evaporator equipment required to transition existing stores to ultra-low GWP or natural refrigerants can easily surpass $1M for even modest sized stores when removal of existing equipment and installation of new equipment is included.  Any incentives proposed should reflect this scale of cost and the lost revenue due to store closure during this process.  Even with incentives, the reality is that some stores will have to permanently close due to the economic considerations of such a required change*.* Operating on margins of 2-3% many retailers would experience an excessive financial hardship.

**3. What safety testing and safety standard updates, if any, are needed for the transition to ultra-low GWP or no-GWP alternatives in this sector?** The HVACRindustry is actively working to get building and mechanical codes updated to accept new alternative low-GWP refrigerants. Concurrently there is a concerted effort to push states to adopt the new codes or adopt legislative language permitting the new EPA SNAP approved refrigerants. Technician training and availability is ramping up but still not prepared for a substantial number of retailers using these refrigerants. On the OEM side new equipment must be tested and listed by safety organizations such as UL. These organizations have limited resources and must meet not only the needs brought on by environmental regulation but also equipment changes proposed by the Department of Energy. Additionally for commercial refrigeration a new safety standard, UL-60335-2-89 will replace the current safety standards in 2024 and that in itself requires more resource time due to changes in the testing procedure.

**4. What barriers exist in bringing technologies such as ejectors, CO2 condensing units and others, to the California market, particularly for smaller refrigeration systems such as those found in convenience stores?** OEM’s are working to provide a variety of options to meet retailer needs – there is no silver bullet and no one technology that both meets compliance requirements and everyone’s needs. Technologies such as CO2 and A2L condensing units and smaller CO2 and A2L rack systems designed for these smaller footprint retailers will be options but still face the same hurdles as mentioned above. Cost and complexity are the two most significant barriers to the implementation of advanced CO2 technologies like parallel compression, injectors and single-compressor condensing units

**Section 10: Overarching Questions**

**38. What factors around PFAS (per- and polyfluoroalkyl substances) should be considered as California transitions to ultra-low- and/or no-GWP alternatives?** Hussmann urges all states which are creating regulations on PFAS to align with the EPA. There needs to be an understanding that the multiple broad definitions of PFAS which exist today are not suitable when making a determination of any negative impact these substances may have on the environment. The EPA has already placed focus on substances which have been identified as a concern (PFOA and PFOS) and which are likely to come into contact with people and the environment. Not all PFAS have been evaluated to see how they fit under PBT (persistent, bioaccumulative, and toxic). Products identified by broad definition to be PFA but not as much concern as a PBT, such as refrigerants, may not have alternatives which may be substituted in their place.

Thank you again for the opportunity to comment on the SB 1206 Assessment Report Request for Information. Hussmann looks forward to working with CARB to create a feasible path for our industry to achieve an orderly phase down of HFC refrigerants. Please let me know if you have any questions regarding these comments.

Sincerely,

Ronald Shebik

Director, Government Affairs and Regulatory Affairs

Hussmann Corporation