



Serving the Vending, Coffee Service and Foodservice Management Industries

Air and Radiation Docket,
Environmental Protection Agency
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Washington, DC 20460
Via Email: A-And-R-Docket@epa.gov

Attention: Docket ID No. EPA-HQ-OAR-2014-0198

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To Whom It May Concern:

As the national trade association of the food and refreshment vending, coffee service, food service management, and equipment manufacturing industries, the National Automatic Merchandising Association (NAMA) appreciates the opportunity to provide public comments on the August 6, 2014, proposed "Protection of Stratospheric Ozone: Change of Listing Status for Certain Substitutes Under the Significant New Alternatives Policy Program" Below are the industry responses to the EPA SNAP – Stratospheric Ozone Regulations Questionnaire.

Proposed Elimination of HFC Blend R-404A

The proposed rule would eliminate the use of HFC Blend R-404A. This would have a major impact on new and retrofit retail food refrigeration equipment currently using R-404A. It would create the need for facility changes, new charging, recovery and handling equipment, training, tooling changes and new parts inventory. All of these would require significant capital investment.

There is currently no refrigerant approved in SNAP for replacement of R-404A. It is our understanding, that ASHRAE and EPA have proposed some replacements, but none have been approved by SNAP at the time of the filing of these comments. Without knowledge as to which actual refrigerant is going to be approved as the acceptable alternative we are unable to determine if commercial refrigeration will require TXV valves. Discussions have provided knowledge that valve manufacturers have not started the design process for new valves. It is our understanding that valve manufacturers may be submitting comments requesting a protracted enforcement and applicability date. We urge the EPA to consider this fact and the comments of the valve manufacturing industry when assessing and setting enforcement and applicability dates.

Compressor manufacturers have begun review of some refrigerants but have not come to a conclusion without an approved alternative. Currently, R290 (propane) is not approved for any system

higher than 150gram (5.29oz) charge. R290 or any other Hydrocarbons have limited use and cannot be used with current showcases due to the charge maximum set by SNAP. R744 (CO₂) can be used but would not work as well in high ambient conditions with a remote condensing application. Due to the requirement of the Department of Energy (DOE), CO₂'s use would be limited to indoor self-contained units, limiting locations of refrigerated vending machines, reducing revenues for the entire supply chain and consumer choice. Further, there are many added costs associated with these types of refrigerants: Hydrocarbon refrigerant will require arc-less components and CO₂ will require thicker walled copper tubing. The industry already has production equipment for CO₂ for vending machines. However, if the rules include Hydrocarbon, vending machine manufacturers would have to purchase equipment and add changes to their production lines for safe use of the Hydrocarbon, adding cost and increasing the need for extended application date of new rules.

Freezers would be subject to the same impact. The industry would be forced into using R290 as this is the only option available from most compressor suppliers. Being pushed into using R290 force would mandate the redesign of machines because R290 is explosive and vending machines have several switches, motors, and relays that could ignite the gas in the event of a leak. It would take several years to redesign all models to meet this type of standard.

Proposed elimination of HFC-134A

The elimination of HFC-134A and certain other refrigerant blends would have a major financial impact on vending equipment as a majority of it uses this refrigerant. If Hydrocarbon is included, the purchase of new equipment as well as changes to the production line for the safe use of the Hydrocarbon would be required. Manufacturers would be forced into R290 and redesigning machines which would take several years and large capital expenditures including: large design cycle in order to update facilities, testing labs, design, test (internal and field), and approval for DOE, ENERGY STAR, NRCan, California Energy, International approvals, UL, and partner approvals.

Proposed 2017 elimination of HFC-134A and blends

The majority of manufacturers have already moved away from using HFC-134A in their foaming processes. However, others will see a 15%-20% reduction in R-value impacting energy consumption along with the manufacturing process and testing changes. This loss will make compliance with DOE's mandates energy consumption rules difficult, if not impossible, to meet.

Proposed changes on impact of exporting vending machines and jobs

The proposed changes in the rules would impact exports of vending machines and jobs. We estimate the impact is the same as domestic, but with the added burden of additional agency testing and approvals essentially doubling testing and agency approval costs. International machine models would need to be redesigned as each country has unique compliance requirements.

The CSA Standard for vending machines (CSA C22.2 No. 128-95) does not presently provide design, construction or marking requirements for the alternate refrigerants. This presents an unknown situation regarding perhaps the industry's largest export market.

This may require hiring temporary employees to handle the added work load. If manufacturing equipment can no longer meet international requirements due to the change this will lead to loss of sales and jobs.

SNAP updates/rules compliance with the proposed or current DOE testing standards

The current DOE 2017 requirement overlaps and is inconsistent with the proposed EPA SNAP rule. The DOE 2017 requirement was based around R-143A and R-404A data. The proposed EPA rule will cause an undue hardship in addition to the current difficulty of meeting the DOE 2017 ruling. We are under the impression that the DOE may believe that the refrigerant should not affect the energy of equipment. However, energy efficiency is very much impacted by the refrigerant type.

Impact on small business operators and raising prices for retrofit and/or repairs

All small business vending machine manufacturers and vending operators will be impacted by the proposed changes. Specifically, small businesses with limited engineering staff stand to be greatly impacted as these regulations take valuable assets away from product development for years. It is difficult to quantify the lost revenue and missed patents associated with compliance that are not accounted for in the impact studies for these regulations. Those assets would have to be re-directed into new refrigerants, after meeting DOE's energy requirements, with the new EPA SNAP requirements. It stifles innovation and growth for small businesses, eliminating jobs.

In addition to facility changes (along with new charging, recovery and handling equipment, training, tooling changes and new parts inventory) the cost to set a new production line is very capital intensive. Also, field service will not be an option for Hydrocarbon systems causing burden and loss of jobs on small businesses.

Vending operators will be negatively impacted. The 2011, the FDA estimated that over 90% of the country's vending operators were small businesses as defined by the Small Business Administration (SBA). The increase costs of vending machines would have a detrimental impact on small businesses and could lead to less new machines being introduced into the marketplace. This result would not further the stated goals of eliminating certain SNAP refrigerants from use. The operators would incur costs for retrofits and repairs as they happen in their service areas. The new regulations could require operators to further educate employees and upgrade equipment and/or trucks among other costs not known at this time.

The proposed new refrigerant transportation and safety for use in vending machines

Safety guidelines will have to be established. This includes, but is not limited to industry and customer education on labeling and ventilation requirements. Manuals for safety on type of refrigerant will have to be developed as well as training to ensure safety to the consumer. This is another added cost to the entire supply chain, including consumers. For example, manufacturers would not be able to air ship charged units --which would require them to pay technicians to charge the units upon arrival. This removes control of quality and reliability of manufacturers' products and adds cost. The new regulations may increase transportation costs as well.

Cost for transitioning a manufacturing facility to comply with the new proposed rules

Commercialization of the entire product line varies from company to company, but the industry believes that the range could be from \$500,000 to several million dollars for all engineering and manufacturing changes.

Examples of previous changes within the vending channels related to refrigerants

HCFC refrigerant such as 141b and 142b and 22 was first proposed to be phased out in 1993. Each of the refrigerants was to be phased-in using a stepped worst-first approach. The April 1999 notice of proposed rulemaking was used to provide relief to small businesses that were not aware on the impending rule. Allocation allotments was proposed and ruled to be able to use some of the proposed HCFC. A 2003 Final Rule allocated allowances for production and consumption of HCFC-22 and HCFC-142b for each of the years 2003 through 2009. EPA allocated allowances and provided reduced allowance in subsequent periods. EPA determined that the percentage of the estimated need allocated in the form of allowances should not remain constant from year to year, but rather should decline on an annual basis.

Effective January 1, 2010, EPA prohibited the use of virgin HCFC-22 and HCFC-142b to manufacture or service new air-conditioning and refrigeration appliances. In a separate rule, under the authority provided in section 615 of the CAA, EPA also prohibited the sale and distribution of appliances and appliance components pre-charged with virgin or used, recovered and recycled HCFC-22 and HCFC-142b.

Also, the conversion from R-12 to R-134a was a 3 to 4 year conversion process. Several million dollars were spent on development, lab testing, equipment, manufacturing changes, blowing agent changes and field testing. R-134a was available for the conversion at the time of conversion.

Timeline of the new rules & approval of machines through private agencies such as UL

The short implementation time frame will create an overload for private agencies and testing labs such as UL. With the proposed ruling being expedited, everyone will be rushing to implement a system and receive review by safety agencies. With no definite refrigerant approved as of yet by SNAP, (especially for replacement of R404a for commercial refrigeration), refrigeration design is not as simple as using a different refrigerant. Therefore, NAMA requests EPA consider this industry challenge when setting enforcement and rules compliance dates.

As mentioned earlier regarding exports, the CSA Standard for vending machines (CSA C22.2 No. 128-95) does not presently provide design, construction or marking requirements for the alternate refrigerants.

Impact of proposed rules on meeting ENERGY STAR requirements with current foam

The proposed rules/changes would have an impact on meeting ENERGY STAR requirements with

the current foam being used in the industry and would impact energy usage. This will adversely impact many companies using the proposed banned refrigerants. NAMA urges EPA to request a formal opinion from the ENERGY STAR office on potential impacts of this rule on meeting their requirements with the current foam being used before moving forward with final rules.

Industry time to comply with a change like the one proposed in the SNAP rule

Based on the R12 to R134a conversion this is likely a 4 to 5 year process, although some estimate the timeline to be as much as 8 years. For R-404a there is no immediate drop in replacement so extra testing and development will be required. Therefore the industry would recommend a 6-8 year phase in period.

Impact on vending operators and cost of repair and retrofit and employee training

Vending operators will require facility changes, along with new charging, recovery and handling equipment, training, tooling changes and new parts inventory. Further, NAMA reminds the EPA that it is estimated that the vending operator community is over 90 percent small business and therefore, strict compliance with the Regulatory Flexibility Act requirements regarding impact on small businesses is requested by NAMA.

Past history refrigerant conversion shows that the proposed 2015 ruling is not feasible. NAMA encourages the EPA to allow the 2017 DOE mandate to occur first, with these EPA SNAP rules following many years after. NAMA appreciates the opportunity to submit our comments on this issue. Should you have any additional questions, please feel free to call or email me at your convenience. My contact information is listed below.

Respectfully submitted,

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