HARDI HEATING AIR-CONDITIONING REFRIGERATION DISTRIBUTORS INTERNATIONAL

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Ms. Cindy Newberg
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U.S. Environmental Protection Agency
Office of Atmospheric Programs
Stratospheric Protection Division
1200 Pennsylvania Avenue, NW
Washington, D.C. 20460

Submitted electronically

RE: Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program under the American Innovation and Manufacturing Act [Docket ID: EPA-HQ-OAR-2021-0044]

Dear Ms. Newberg,

On behalf of Heating, Air-conditioning & Refrigeration Distributors International (HARDI) I write to offer comments on the Environmental Protection Agency's (EPA) proposed regulation for the Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program under the American Innovation and Manufacturing Act [Docket ID: EPA-HQ-OAR-2021-0044].

HARDI is a trade association comprised of over 800 member companies, more than 400 of which are U.S.–based wholesale distribution companies. Over 80 percent of HARDI's distributor members are classified as small businesses that collectively employ in excess of 60,000 U.S. workers, representing more than $40 billion in annual sales and an estimated 70 percent of the U.S. wholesale distribution market of heating, ventilation, air-conditioning and refrigeration (HVACR) equipment, supplies, and controls.

HARDI appreciates EPA's request for comments on this proposed rule and its many components. As wholesaler-distributors of HVACR products HARDI members generally are not directly

impacted by the allocation and allowance process but are affected by the overall phasedown of HFCs and the compliance measures included in the rule are burdensome to distributors. These comments will focus on components of the allowance and allocation system and the compliance measures that impact distribution.

**1. Legislative History of the American Innovation and Manufacturing Act**

*a. American Innovation and Manufacturing Act*

HARDI and the entire HVACR industry have been strong supporters of the American Innovation and Manufacturing Act[1] (AIM Act) along with the Kigali Amendment to the Montreal Protocol. Full implementation of the AIM Act is the best option for the HVACR industry as the legislation builds upon past successes in transitioning away from harmful ozone-depleting substances and moves the industry up the technological ladder towards more environmentally friendly products. This innovation in HVACR will help the U.S. continue to be a market leader in this global industry. Based upon previous transitions, we know that the market will accelerate the transition to new refrigerants simply by ensuring that domestic production and imports match decreases in production globally.

HARDI supported the AIM Act because it provided a limited grant of authority[2] to the Environmental Protection Agency (EPA) to regulate the production and consumption of HFCs. This grant of authority was specifically meant to be limited because it utilized the parts of previous

[1] American Innovation and Manufacturing Act, Public Law No: 116-260 Division S, Sec. 103 (Date: December 27, 2020, enacted H.R. 133) Available from: https://www.congress.gov/bill/116th-congress/house-bill/133/text?r=6&s=1.
[2] *Federal HFC Phase-down* [Issue Brief], Heating, Air-conditioning, & Refrigeration Distributors International (2019). https://f.hubspotusercontent40.net/hubfs/4929193/HFC%20Phasedown%20Issue%20Brief.pdf.

phaseouts that worked without the need to add additional regulations that could potentially harm parts of the industry. Phasing down the use of HFCs at the production and import stage paves the way for new technologies and protects U.S. jobs across the HVACR industry. HARDI supports the efforts of the AIM Act to phasedown the production and import of HFCs over 15 years to gradually reduce the availability of older refrigerants until 15 percent of the baseline remains. This remaining 15 percent production and import of HFCs will provide industries time to find acceptable alternatives to current HFCs and ensure no consumer is forced into changing products before the end of its useful life.

*b. State regulations of HFCs*

HARDI also supports this federal phasedown because of its impact on state regulations. While the AIM Act does not contain any preemption clause, the mere existence of federal regulations on HFCs will reduce the need for many states to develop their own HFC regulations. HARDI does not support a patchwork of state-by-state regulations on HFCs that would make it harder if not impossible for distributors to conduct business across state lines.

*c. History of the Montreal Protocol*

The Montreal Protocol is an international agreement, finalized in 1987 and ratified by the U.S. Congress in 1988,[3] to protect the stratospheric ozone layer. This international agreement led to the phaseout of ozone-depleting substances including many older chlorofluorocarbon and hydrochlorofluorocarbon refrigerants. The U.S. HVACR industry was an early supporter of the

[3] Montreal Protocol on Substances that Deplete the Ozone Layer. Signed 16 September 1987. Ratified 3 March 1988. UNTS vol. 1522 nos. 26369-26373.

Montreal Protocol and helped shape the phasedown contained in Title VI of the Clean Air Act.[4] That phaseout is the blueprint for the phasedown of HFCs authorized under the AIM Act.

*d. History of the Kigali Amendment*

Recognizing the importance of phasing down the use of HFCs due to their high global warming potential (GWP) the parties to the Montreal Protocol signed the Kigali Amendment in 2016.[5] This global agreement to phasedown the production and consumption of HFCs is another opportunity for the U.S. HVACR industry to lead and while not yet ratified by the United States, the industry wants to work with EPA to achieve the goals of the amendment through the AIM Act.

**2. Allocation and Allowance System**

*a. Production and consumption baseline*

The allocation rule is one of the most important parts of ensuring an orderly phasedown, HARDI has historically stayed away from commenting on the calculation of the overall production and consumption baseline and will continue to do so as our members are downstream entities in the supply chain.

*b. Allowance allocation time-period and equitable allowance system*

As purchasers of HFC refrigerants HARDI does want to comment on the allowance allocation system. EPA is seeking feedback on the period used for determining allowances and we support using the full 2011-2019 range for determining allowances and allowing each applicant to use the

[4] 42 USC § 7671.
[5] Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer. Signed 15 October 2016. C.N.872.2016.

average from the highest three years of market share from within this range. The three-year period can be non-contiguous and any applicant that does not have three years to choose from should be considered for the new-entrant set-aside pool of allowances. Allowing applicants to use their best three years of market share will provide better equity to the system by ensuring applicants are not harmed by past market manipulation. HARDI also urges EPA to correct applicants' market share averages for any improper actions including documented cases of dumping[6789] of product or investigations into circumvention of anti-dumping duties as had been identified by the U.S. Department of Commerce.

While there is little legislative history to the AIM Act, when introducing the legislation Senator John Kennedy (R-LA) was quoted in his press release, "The world is moving away from hydrofluorocarbons, and the U.S. is in danger of getting stuck at the starting gate. We want these new refrigerants to be produced in the U.S., not in China."[10] Correcting for market manipulation,

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[6] *Difluoromethane (R-32) From the People's Republic of China: Antidumping Duty Order*, International Trade Administration (11 March 2021), https://www.federalregister.gov/documents/2021/03/11/2021-05099/difluoromethane-r-32-from-the-peoples-republic-of-china-antidumping-duty-order.

[7] *1,1,1,2 Tetrafluoroethane (R-134a) from the People's Republic of China: Antidumping Duty Order*, International Trade Administration (19 April 2017), https://www.federalregister.gov/documents/2017/04/19/2017-07913/1112-tetrafluoroethane-r-134a-from-the-peoples-republic-of-china-antidumping-duty-order.

[8] *Hydrofluorocarbon Blends From the People's Republic of China: Antidumping Duty Order*, International Trade Administration (19 August 2016), https://www.federalregister.gov/documents/2016/08/19/2016-19873/hydrofluorocarbon-blends-from-the-peoples-republic-of-china-antidumping-duty-order.

[9] *Pentafluoroethane (R-125) From the People's Republic of China: Initiation of Less-Than-Fair-Value Investigation*, International Trade Administration (8 February 2021), https://www.federalregister.gov/documents/2021/02/08/2021-02529/pentafluoroethane-r-125-from-the-peoples-republic-of-china-initiation-of-less-than-fair-value.

[10] Press Release, Senator John Kennedy, Sens. Kennedy And Carper File Legislation To Save Jobs During Phasedown Of Hydrofluorocarbons (Oct. 30, 2019), https://www.kennedy.senate.gov/public/press-releases?ID=47698154-41C9-4CF9-809D-DB75FF32291B.

while not expressly written in the legislation is within the intent of the introducing senator and should be considered. As purchasers we want to see a healthy market that ensures a fair price for products, and we believe EPA should correct for manipulation in determining allowances. We also want to see new entrants into the market and support the new-entrant set-aside to ensure continued competition. Using this method for 2022 and 2023 will give EPA time to study how the allocation system works in time to make changes for the allocation rule affecting 2024 and beyond.

*c. Reclaimer access to set-aside*

In addition to the traditional allowance holders of producers and importers, HARDI supports other commentors' proposals for allowing all reclaimers access to a set-aside of allowances for virgin refrigerant gases. Reclaim is a vital component to the refrigerant management process and data on reclaimed gases in recent years shows the need to ensure more recovery is done to feed the reclaim process. The AIM Act specifically calls on EPA to increase opportunities for reclaim.[11] One such method is allowing all reclaimers to access a set-aside of allowances for virgin refrigerant gases to be used to bring recovered gas to match specifications outlined in AHRI 700-2016 as required by section 608.[12]

Reclaimers need access to virgin material to ensure recovered gas blends are rebalanced to the appropriate ratio of components. These components must be accurate within one half of one percent of the prescribed blend. If any component is below this threshold, virgin material can be added to bring the blend into the appropriate balance. The more a blend is out of balance, the costlier it is to reclaim; allowing reclaimers access to allowances will ensure they have the

[11] Sec. 103(h)(2)(A) of the American Innovation and Manufacturing Act.
[12] 42 USC § 7671g.

components necessary to properly blend reclaimed gases for sale into the market. Allowances will also make it economical to reclaim more out of balance blends which will help ensure a strong supply of reclaimed refrigerant to provide service gases to the industry.

Allowing all reclaimers access to a set-aside is one component to increasing reclaim, and HARDI encourages EPA to put appropriate guardrails in place to ensure any allowances received by the reclaimers are used exclusively for reclaim and that the use of virgin material is limited to the amount necessary to rebalance these HFC blends. Any company receiving an allocation as a reclaimer should guarantee they will not use the allowance to enter the virgin refrigerant market or claiming refrigerant that is mostly virgin material is being sold as reclaim. Appropriate reporting requirements from reclaimers using allowances from the set-aside in 2022 and 2023 will ensure they are not abusing the set-aside and serve as a learning tool for EPA to develop a better calibrated set-aside for the next allocation rule if necessary. HARDI also encourages EPA to pursue additional regulations to increase recovery of HFC refrigerants to increase the supply of reclaimed gas beyond 2024. Recovery regulations will be possible in a future rulemaking on technician certification, and we look forward to working with EPA as proposals are developed.

*d. Batch testing and AHRI 700 purity standard*

EPA is seeking comment on requiring refrigerants to be batch tested to meet the specifications contained in Appendix A to subpart F of part 82. HARDI supports the batch testing requirement and encourages EPA to require all refrigerants to meet the AHRI 700-2016 standard used by reclaimers. Reports of illegal HFC imports being of low quality and impure should concern the

industry[13] and a simple solution to help identify illegal production or imports of HFCs is to require all refrigerants are batch tested to meet the AHRI 700-2016 standard. Reclaimed refrigerant already goes through the expense of testing gases for purity, all producers or importers should be required to meet the same standard to provide assurances to customers and will help put reclaimed refrigerant on a level playing field.

*e. Concerns with the allocation rule*

Overall, HARDI supports and appreciates the allocation and allowances system proposal contained in the proposed rule. HARDI also appreciates EPA seeking feedback on many components of the proposed rule, however there are several concerning compliance measures proposed by EPA that go far beyond the authority of the agency and will be outlined in sections 3 and 4 of these comments.

**3. Ban on non-refillable cylinders**

*a. EPA's proposed limits on packaging of regulated substances*

One of the proposals HARDI is concerned with is the plan to ban the use of non-refillable cylinders for regulated substances. The proposed rule refers to non-refillable cylinders as disposable cylinders, HARDI rejects this phrasing as even refillable cylinders are disposable when they reach the end of their usable life. This ban would effectively end the use of non-refillable cylinders from the industry as most next generation refrigerants use a regulated substance in its blend. HARDI

[13] *Reports of R-134a Contaminated with R-40 and Other Refrigerants* [White paper], Air Conditioning, Heating, and Refrigeration Institute (2013), https://www.ahrinet.org/App_Content/ahri/files/News%20Room/Press%20Releases/2013/AHRI_R_40_Contaminati on_white_paper.pdf.

opposes this proposed ban because of its effect on the industry and believes other methods can achieve the same environmental benefits.

According to the reasons given by EPA, up to 8 percent of the service gas contained in a non-refillable cylinder can remain as a "heel"[14] and can potentially be released to the atmosphere if not properly recovered. This 8 percent estimate is vastly larger than most other estimates of average heel remaining in non-refillable cylinders. One study conducted for the California Air Resources Board found the average remaining heel was 1.85 percent[15] or approximately 9 oz. from a 30-pound cylinder. Additionally, other commenters that commonly deal with recycling non-refillable cylinders have found much smaller heels than 8 percent.

The EPA proposal says that banning the use of non-refillable cylinders, "would increase environmental benefit including by ensuring the heels left in a cylinder are not released to the atmosphere when non-refillable cylinders are discarded." This proposal skips many other reasonable steps in reducing the environmental impact of non-refillable cylinders including improving service technician requirements on evacuation and recycling of cylinders. In creating California's Refrigerant Management Program,[16] the state's Air Resources Board studied the idea of banning non-refillable cylinders[17] and after careful study, research, and stakeholder feedback determined the better course of action was to strengthen requirements on the evacuation and

[14] 40 CFR part 82 subpart F: Heel means the amount of a controlled substance that remains in a container after it is discharged or off-loaded (that is no more than ten percent of the volume of the container).
[15] *Lifecycle Analysis of High-Global Warming Potential Greenhouse Gas Destruction,* ICF International (October 2011), https://ww2.arb.ca.gov/sites/default/files/classic//research/apr/past/07-330.pdf.
[16] *Refrigerant Management Program*, California Air Resources Board (2009), https://ww2.arb.ca.gov/our-work/programs/refrigerant-management-program/about.
[17] *Id.*

recycling of cylinders.

*b. Proper disposal of non-refillable cylinders*

A better solution to reducing the environmental impact of service gas heels would be to improve the regulations surrounding end of life management (ELM) for cylinders. Proper ELM regulations should focus on evacuation and recycling of non-refillable cylinders. The AIM Act requires EPA to increase opportunities for reclaim, strengthening evacuation requirements can both increase reclaim and provide the same environmental benefits sought by the agency. Strengthening ELM requirements can be done in a later rulemaking as EPA is expected to develop new certification requirements to deal with next generation A2L refrigerants[18][19] that are anticipated to be used in air-conditioning and refrigeration systems because of the refrigerants' low-GWP ratings.[20] As part of this update to technician certification, EPA should reinforce system service regulations to include stronger ELM requirements. One way to increase technician compliance is to ban all service gas cylinders from landfills using authority granted under the Resource Conservation and Recovery Act (RCRA). RCRA allows EPA to ban certain materials from entering landfills while not regulating the materials itself. Banning cylinders from landfills will force technicians to

[18] Refrigerants are classified into safety groups consisting of two or three alphanumeric characters. The first character indicates the toxicity as class A or class B, class B has higher toxicity than class A. The Arabic numeral with or without suffix letter denotes one of the four flammability classes: 1, 2L, 2, or 3. Class 2L is referred to as lower flammability and meets the four following conditions: exhibits a flam propagation when tested at 140°F and 14.7 psia; has an LFL >0.0062 lb/ft$^3$; has a heat of combustion <8169 Btu/lb; and has a maximum burning velocity of ≤ 3.9 in./s when tested at 73.4°F and 14.7 psia in dry air.

[19] *Designation and Safety Classification of Refrigerants*, American Society of Heating, Refrigerating and Air-Conditioning Engineers (2019), https://ashrae.iwrapper.com/ASHRAE_PREVIEW_ONLY_STANDARDS/STD_34_2019.

[20] *Protection of Stratospheric Ozone: Listing of Substitutes Under the Significant New Alternatives Policy Program,* Environmental Protection Agency (6 May 2021), https://www.govinfo.gov/content/pkg/FR-2021-05-06/pdf/2021-08968.pdf.

dispose of cylinders in an approved manner including evacuation of service gases. Recovery of service gases will naturally increase as reclaimers increase purchase price of recovered refrigerants. EPA should allow technicians to pay for evacuation by service providers such as reclaimers, distributors, or metal recyclers to meet the ELM requirement. Proper evacuation of non-refillable cylinders will have minimal impact on technicians already possessing the proper equipment, according to one study[21] it would take a proficient technician approximately two hours to empty 40 cylinders to bring each cylinder to vacuum measured at 15 inHg.[22]

Reinforced service standards are also a proposal that has been endorsed by the National Academy of Sciences. In studying the seasonal contributions of HFC-134a and HCFC-22 researchers discovered[23] there was a connection between service standards and the release of refrigerant. It was surprising to see EPA ignore the recommendations of the National Academy of Science on reducing the impact of refrigerant releases and move to banning non-refillable cylinders. Section 307 of the Clean Air Act[24] requires EPA to evaluate recommendations from the Scientific Review Committee or the National Academy of Sciences and the agency must provide reasons for ignoring this recommendation.

*c. Banning non-refillable cylinders is costly to the supply chain*

The proposed ban on non-refillable cylinders would add immense cost to every segment of the industry that uses small cylinders and in many ways is not feasible in the timeline outlined by EPA.

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[21] Id., 9.
[22] Inches of Mercury, unit of measurement for pressure when determining vacuum.
[23] Xiang, Bin et al., *Global emissions of refrigerants HCFC-22 and HFC-134a: Unforeseen seasonal contributions* (Proceedings of the National Academy of Sciences of the United States of America, 9 December 2014), https://www.pnas.org/content/111/49/17379.
[24] 42 USC 7607(c)(3).

Based on estimates from discussions with market experts[25] the industry uses between 6 and 7 million non-refillable cylinders, significantly higher than the 4.5 million estimated by EPA. The agency also assumes that due to the turnover rate of cylinders a smaller fleet of refillable cylinders is needed compared to the annual number of non-refillable cylinders consumed. HARDI disagrees with this assumption and a CARB lifecycle analysis[26] determined that four refillable cylinders would be necessary for each non-refillable cylinder currently in the market. This increase in fleet size is due to the number of cylinders in storage, use, refilling, and transit at any given moment. Based on this information, a minimum of 24 million refillable cylinders would be needed to meet demand caused by banning non-refillable cylinders. There is simply no way to construct 24 million cylinders within the timeframe necessary to meet the non-refillable cylinder ban.

This large of a fleet of cylinders will also have a major financial impact on the cylinder owners, distributors, and contractors in the form of cylinder deposits. As cylinders are transferred from producer/importer to distribution deposits must be also transferred from distributors to producer/importer. Distributors would need to then wait for deposits to be paid by contractors to bring the balance sheet back to zero. At $120[27] per cylinder the entire fleet of cylinders would remove $2.88 billion from the industry. Cylinder deposits are further locked out of the industry as lost or stolen cylinders are not returned and new replacement cylinders enter the market. It can take years for the lost/stolen cylinder deposits to be forfeited.

Storage of returned cylinders will also have an impact on distributors. Technicians will not necessarily swap out cylinders at a one-for-one rate as small heels may not be enough to do a full

[25] Discussions with Worthington Industries and The Chemours Company
[26] Id., 9.
[27] Cylinder deposits in Canada are currently $120/cylinder and the U.S. would be expected to have a similar deposit price

day of jobs and a new cylinder is purchased while the nearly empty cylinder is not returned until it can be fully emptied. As groups of empty cylinders are returned these cylinders will overtake the space emptied by sales of new cylinders taking valuable floor space away from other products.

This storage issue will be further complicated by the introduction of lower-flammability A2L refrigerants. HARDI has been advocating for increased storage amounts of flammable gases as limited by the International Fire Code. A proposal[28] is working its way through the code process that would allow a distributor to store up to 20,000 pounds of lower-flammability service gases without needing expensive retrofits to current buildings. According to a survey of HARDI members,[29] 69 percent of members store up to 20,000 pounds of service gases in cylinders at the peak of cooling season. Due to the increased danger caused by the lower-flammability service gas there is also a limit on the height these cylinders can be stored with a maximum height of 6 feet 6 inches causing storage to take up even more floor space.[30] Requiring the use of refillable cylinders would effectively double the storage limits needed to be approved by the fire code, an alternative that is not viable at this time. This is due to the fire code treating "empty" cylinders that have not been cleaned as containing the full capacity of the cylinder for determining the maximum allowable quantity to be stored.[31] The only possible storage solution during peak season would be

[28] *Proposal 6059, Flammable Gas MAQ to the 2021 International Fire Code,* Fire Code Action Committee (2021), https://www.cdpaccess.com/proposal/6059/20179/preview/ (CDPAccess login required).
[29] *Refrigerant Storage Practices* [Presentation], Heating, Air-conditioning, & Refrigeration Distributors International (2020), https://f.hubspotusercontent40.net/hubfs/4929193/HARDI%20Member%20Refrigerant%20Storage%20Practices%20Public.pdf
[30] *Id.*, 12.
[31] *International Fire Code,* 5704.3.3.4 Empty containers or portable tank storage., International Code Council (2018).

to store the empty cylinders outside accelerating the deterioration of the cylinder due to weather.[32]

Transportation costs for moving refillable cylinders will also increase. Refillable cylinders weigh more, approximately 15 additional pounds per cylinder according to Worthington, a manufacturer of service gas cylinders. This increased weight would reduce the capacity of a semi-trailer to 870 refillable service gas cylinders from the current capacity of 1,120 full disposable service gas cylinders.[33] The change to refillable cylinders would increase transportation costs to move the same amount of service gas by nearly 30 percent[34] for the delivery of full cylinders. The change in cylinder type would increase the per mile costs from the June national average of $2.67[35] to $3.44[36] per mile to transport the same amount of service gas based on current trucking costs. Transportation costs increase further when empty cylinders need to be returned to the producer/importer for cleaning and refilling.

The increased weight of the refillable cylinder will also have an impact on technicians. Air-conditioning units are often located away from driveways or access points including on rooftops for many multifamily and commercial buildings. The increased weight will take a toll on technicians hauling service gas cylinders across job sites. This increased stress on technicians'' bodies could lead to long-term healthcare costs or transitions out of the industry.

In totality the move to ban non-refillable cylinders will increase costs at every point in the supply chain from the packager down to the technician level. The increase in all these costs could have

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[32] *Facts You Should Know About Storing Compressed Gas Cylinders,* Parker (29 December 2017), http://blog.parker.com/facts-you-should-know-about-storing-compressed-gas-cylinders.
[33] *Id.,* 9.
[34] 1,120/870=1.29
[35] DAT Trendlines, DAT Freight & Analytics (30 June 2021), https://www.dat.com/industry-trends/trendlines/van/national-rates.
[36] 2.69*1.29=3.44

an unintended impact on the service gas market.

*d. Displacement of service gas sales from HVACR distributors*

For many wholesaler-distributors, supplying service gases is an extra product provided by the business to attract customers, not a major source of revenue. Wholesale-distribution is a business and as such, product decisions must be made based around how that product affects the profitability of the business. Service gases have low margins, but distributor expertise in refrigerants brings in customers looking for higher margin products such as equipment. Rising costs for service gases will not only drive down margins but could cause customers to search for other distributors offering a better price. This shift in the market caused by the ban on non-refillable cylinders will make it more likely that distributors will exit the service gas business, forcing service gas sales out of the distribution channel.

If enough distributors stop supplying service gases, a third party outside the traditional HVACR channel will need to fill the gap and a logical source would be suppliers of other industrial gases. These businesses focus their revenue on cylinder leasing instead of the value of the gases sold. Most industrial gas distributors are focused on driving down costs,[37] their business model is more closely aligned with the fast-food industry, minimal variance in products leading to competition on price. On the other hand, HVACR distribution is based on being a specialist and offering that specialist knowledge to customers who buy their products. With no incentive to provide training or expert advice, the contractor community will suffer if industrial gas distributors take over the

[37] Aase, Guttorm et al., *Getting value from advanced digital technology for industrial gas companies* (McKinsey & Company, 16 February 2021), https://www.mckinsey.com/industries/chemicals/our-insights/getting-value-from-advanced-digital-technology-for-industrial-gas-companies#.

market.

The loss of expert advice and training will cause further disruptions to the contractor community as the transition to new refrigerants occurs. Distributors provide expert knowledge on new equipment lines and ensure contractors and technicians understand any changes to how a product is installed. Dividing the purchases of equipment and service gases make it less likely this level of service will continue. Industrial gas suppliers rarely see changes in regulations affecting their products and are less likely to be experts on new refrigerants and the impact of changing regulations on those gases. This lack of expert advice will decrease the safety and efficiency of the contractor community.

Having a less well-trained contractor community will lead to increased mistakes ranging from equipment failures that require additional consumer dollars to fix in the future to more instances of injuries to the contractor community through preventable accidents. Distributors leaving the service gas market is the worst-case scenario of what could happen if EPA bans non-refillable cylinders and should be a consideration before finalizing the proposed non-refillable cylinder ban.

*e. EPA lacks authority to ban non-refillable cylinders*

In addition to opposing the proposed ban on non-refillable cylinders because of its impact on the industry, HARDI is also concerned the ban goes beyond the authority granted by the AIM Act. The proposed rule does not explicitly provide where the agency is granted the authority to ban non-refillable cylinders and after careful analysis of both the AIM Act and the Clean Air Act Amendments of 1990,[38] we have concluded EPA does not have the authority to ban non-refillable

[38] Public Law No: 101-549 (Date: 15 November 1990, enacted as S. 1630), Available from: https://www.congress.gov/101/statute/STATUTE-104/STATUTE-104-Pg2399.pdf.

cylinders.

The AIM Act grants EPA broad authority for the "Management of Regulated Substances" however this authority does not extend to cylinders. Subsection (h)(1) of the AIM states:

> IN GENERAL.—For purposes of maximizing reclaiming and minimizing the release of a regulated substance from equipment and ensuring the safety of technicians and consumers, the Administrator shall promulgate regulations to control, where appropriate, any practice, process, or activity regarding the servicing, repair, disposal, or installation of equipment (including requiring, where appropriate, that any such servicing, repair, disposal, or installation be performed by a trained technician meeting minimum standards, as determined by the Administrator) that involves—
>
> (A) a regulated substance;
>
> (B) a substitute for a regulated substance;
>
> (C) the reclaiming of a regulated substance used as a refrigerant; or
>
> (D) the reclaiming of a substitute for a regulated substance used as a refrigerant.

While the section appears to provide the agency very broad authority, that authority is limited to equipment. The plain language reading of this subsection forecloses any regulatory authority beyond the regulation of equipment or any practice, process, or activity regarding the servicing, repair, disposal, or installation of equipment. The storage of services gases, specifically what kind

of cylinder is used for storage, is beyond the authority granted by the AIM Act.

To the casual observer, topping off equipment using services gases would be considered part of the servicing, repair, or installation of equipment. However, the type of cylinder the service gas is sourced from is irrelevant to the practice, process, or activity, which means any regulations defining what kind of cylinders can be used to store and transport HFCs is beyond the agency's power to regulate. This distinction is important in understanding the limits on what products EPA can and cannot regulate. Many components are included in the servicing, repair, or installation of equipment but are not a component of the refrigerating system used by the equipment and should not be regulated by EPA. Allowing EPA to extend its reach is a slippery slope that could lead to the regulation of component parts unrelated to the refrigerating system.

EPA also does not have authority to ban non-refillable cylinders through any other part of the AIM Act. The proposed rule includes a reference to subsection (k)(1)(A) of the AIM Act in which EPA says, "the AIM Act provides EPA with the authority to promulgate necessary regulations to carry out EPA's functions under the Act, including its obligations to ensure that the Act's requirements are satisfied." While subsection (k)(1)(A) does give EPA power to do rulemakings and propose rules, those rules are limited to the "carry[ing] out EPA's functions under the Act." The AIM Act does not include anti-venting functions and the proposed rule specifically states in the section on banning non-refillable cylinders the purpose is to reduce the release of heels to the atmosphere.

While the AIM Act does not include anti-venting statues, section 608 of the Clean Air Act Amendments of 1990[39] does regulate the venting of ozone depleting substances and substitutes including HFCs. Section 608 also does give EPA the authority to stop the knowingly venting of a

[39] 42 USC §7671g.

substitute substance, but this regulatory power is limited to the "maintaining, servicing, repairing, or disposing of an appliance…which contains and uses as a refrigerant any such substance." Section 608 also contains a definition of appliance for this section, "For purposes of this paragraph, the term 'appliance' includes any device which contains and uses as a refrigerant a substitute substance and which is used for household or commercial purposes, including any air conditioner, refrigerator, chiller, or freezer." Both portions of section 608 are consistent in using the phrase "which contains and uses as a refrigerant." While service gases stored in cylinders are commonly called refrigerants, refrigerant is defined under 40 CFR part 82 subpart F and requires that the ODS or substitute is "used for heat transfer purposes" which can only be done inside of equipment as there is no heat transfer purpose created by storage in cylinders. For this reason, section 608 cannot be used to ban non-refillable cylinders.

EPA must also be careful not to attempt to expand the currently undefined term "equipment" in the final rule to include cylinders. While the common definition of equipment, "The necessary items for a particular purpose,"[40] may seem to include cylinders as a necessary item to the "practice, process, or activity regarding the servicing, repair, disposal, or installation," in the context of this rule, the common definition should not be used. The recent Supreme Court case Van Buren v. United States[41] goes into detail on the difference between common definitions and specialized meaning. Footnote 7 specifically quotes, "When a statute, like this one, is 'addressing a . . . technical subject, a specialized meaning is to be expected.'" To meet this specialized meaning within the HVACR industry, any definition of equipment would need to be materially similar to

[40] "Definition of equipment". Oxford University Press. Lexico.com. 21 June 2021. https://www.lexico.com/en/definition/equipment.
[41] Van Buren v. United States, No. 19-783, slip op. at 1 (U.S. 3 June 2021) (majority opinion), https://www.supremecourt.gov/opinions/20pdf/19-783_k53l.pdf.

products classified as "appliance[s]" under the Clean Air Act. 40 CFR part 82 subpart F defines appliance:

> Appliance means any device which contains and uses a class I or class II substance or substitute as a refrigerant and which is used for household or commercial purposes, including any air conditioner, motor vehicle air conditioner, refrigerator, chiller, or freezer. For a system with multiple circuits, each independent circuit is considered a separate appliance.

Cylinders containing service gases do not meet the definition of appliance and would not be considered equipment by the common HVACR industry definition of equipment.

In finalizing the proposed rule, EPA should also consider the requirement contained in the AIM Act that specifies EPA rulemakings shall follow administrative procedures under Section 307 of the Clean Air Act.[42] Section 307(d)(9) allows the courts to review and reverse any section found to be "in excess of statutory jurisdiction, authority, or limitations, or short of statutory right."

*f. No path forward for non-refillable cylinder ban in final rule*

For the reasons outlined above, EPA's proposal to ban the use of non-refillable cylinders, and any attempts to alter definitions in the final rule to allow the proposal, would be beyond the authority granted by the AIM Act or the Clean Air Act. EPA should not finalize the proposal to ban non-refillable cylinders in the final rule and should instead work with the industry to strengthen regulations regarding the evacuation and disposal of cylinders to provide the same environmental

[42] 42 USC § 7607(d).

benefits while acting within the authority granted by the AIM Act and Clean Air Act.

**4. Proposed Tracking of Service Gas Cylinders Through the Supply Chain**

*a. Certification is valuable to final customer, tracking is not*

While HARDI supports the concept of a certification program to "ensure that HFCs introduced into and distributed or sold in the United States are covered by an allowance or were reclaimed," we are very concerned that EPA is pursuing a misguided attempt to blend certification with tracking. The final rule should be limited to a certification program where end-users can verify their purchase was produced or imported with an allowance. In our opinion, certification should focus on the upstream entities from when the final product is created. Once the product is in its final state, which for the HVACR industry means a refrigerant gas sold as service gas or to be used in the initial factory charging of equipment, there is no longer a need for tracking. Additionally, any tracking beyond its final product stage is filled with potential legal hurdles for maintaining confidential business information including market share, customer lists, and other potential trade secrets.

*b. Tracking individual cylinders would be a massive burden on the supply chain*

As outlined in the docket memo *Overview of Supply Chains for Selected Hydrofluorocarbon (HFC) Product Types*, there are multiple steps within the HVACR service gas supply chain including producers/importers, packagers, regional distributors, wholesaler-distributors, and end-users. While this document describes the supply chain for a single product, HFC service gases, it does not adequately show the full impact of how the HVACR supply chain works. Figure 1 shows a more accurate, but still simplified version of the HVACR channel. Wholesaler-distributors serve

as a single point of sale for the various equipment, parts, and supplies including service gases necessary for contractors/technicians to install, maintain, repair, or replace equipment. This requires distributors to manage inventory from multiple sources and requires complex inventory management systems.

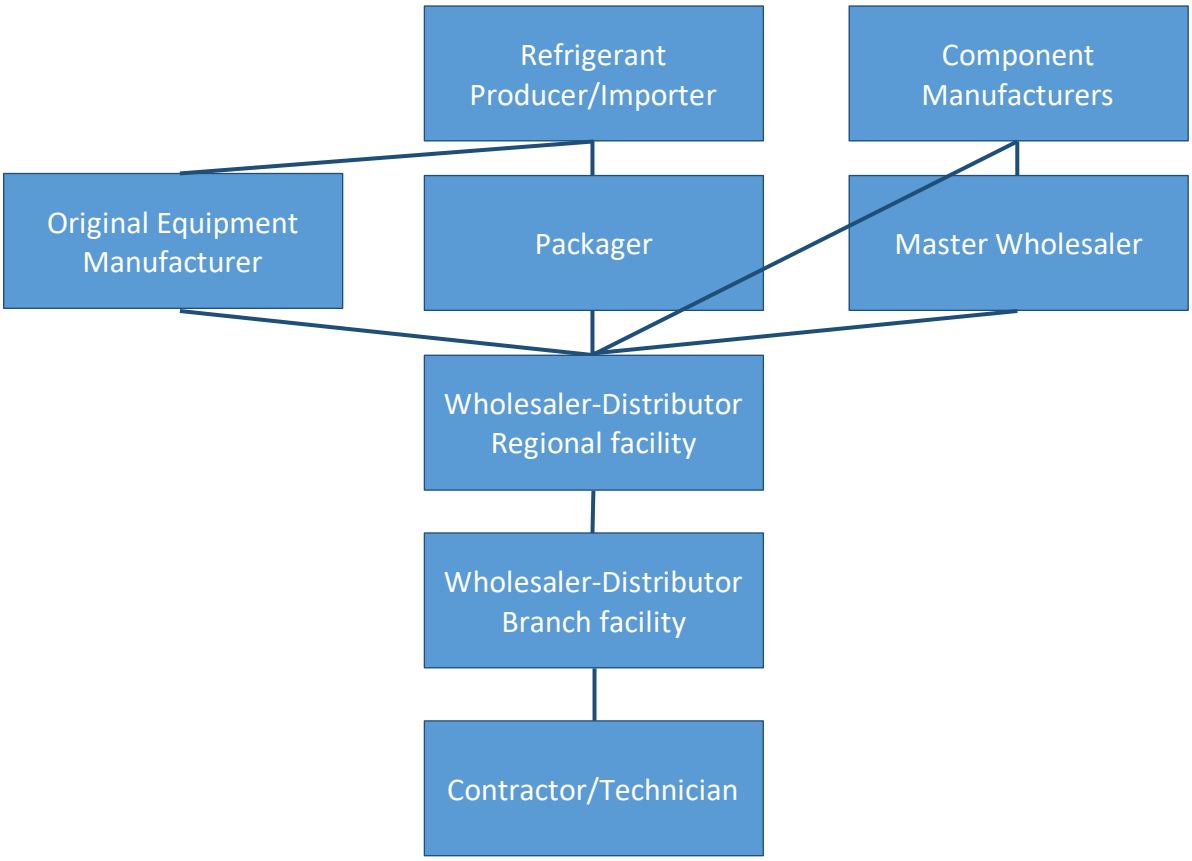


*Figure 1. Diagram of HVACR Channel*

Adding a cylinder tracking system involving the scanning of individual cylinders runs counter to any current inventory tracking system and would disrupt the current method of fulfilling customer orders. Additionally, the method of fulfilling customer orders can vary by the size of the distributor. Some larger, more complex, companies use Enterprise Resource Planning (ERP)

systems to send electronic pick tickets[43] to warehouse workers identifying where the individual product is known to be stored and exactly which product to pick if an individual serial number is known. Other smaller companies rely on a customer making a purchase at a sales counter while a warehouse worker uses a paper pick ticket to pick inventory from a cache of products and it is unknown which specific piece of product is selected. Adding a cylinder tracking system that does not operate with existing ERP or manual pick ticket systems would add complexity to the system and likely lead to mistakes.

This system would further be complicated if EPA finalizes the proposed ban on non-refillable cylinders. Under a scenario where all cylinders are refillable, the tracking system must not only account for the process to move from producer/importer/reclaimer through the channel to the end-user but also track the cylinder back to the producer/importer/reclaimer including cylinders shipped to the wrong producer/importer/reclaimer and transferred back to the correct owner where the cylinder is refilled and the QR code or other identification system must be reset to allow for the certification and tracking of the new refrigerant in the cylinder.

Overall, it is highly unlikely that the addition of a complex tracking system across multiple market actors using multiple inventory tracking systems will be able to accurately track all cylinders through the supply chain and back to the owners.

*c. The burden of protecting confidential business information outweighs benefits of cylinder tracking*

The AIM Act requires EPA to follow the requirements of Clean Air Act section 307[44] which

[43] A pick ticket is a list used to gather items to be shipped from a warehouse.
[44] 42 USC § 7607(a).

includes strong protections of confidential information including trade secrets. Additionally, the Defend Trade Secrets Act[45] provides businesses with a cause of action for the divulging of trade secrets including business information such as market share and customer lists. The Defend Trade Secrets Act only has two requirements for economic or financial information to be considered a trade secret: (1) the business owner has taken reasonable measures to keep the information private; and (2) the information has economic value separate from the business that is valuable because it is not generally known. Customer lists and market share information both meet these requirements and maintaining the secrecy of this information is necessary for other business operations including lines of credit from banks used to buy inventory and maintain operations.

The proposed rule includes a planned public database of information containing listings of sales between business entities. This information would allow competitors to not only determine market share based on the number of cylinders sold but also create a customer list that can be misappropriated. While the mere listing of customers does not necessarily grant trade secret protection, the addition of sales history of service gases purchases does meet the courts' test[46] for determining a customer list to be a trade secret. Even if the information is kept confidential by EPA, the threat of cyberattack still provides liability to the agency if this information is released. The best option is to not collect tracking information that would lead to the creation of a database with trade secrets contained.

*d. AIM Act authority for reporting requirements limited to upstream entities*

The AIM Act grants EPA the authority to require disclosure of information for monitoring and

[45] 18 U.S.C. § 1839.
[46] Select Energy Servs., Inc. v. Mammoth Energy Servs., Inc., No. CIV-19-28-R, 2019 WL 1434586, at *5 (W.D. Okla. Mar. 29, 2019).

reporting, however these requirements are limited to "each person who, within the applicable reporting period, produces, imports, exports, destroys, transforms, uses as a process agent, or reclaims a regulated substance."[47] Distributors and contractors generally do not produce, import, export, destroy, transform, use as a process agent, or reclaim any HFCs and therefore should not be subject to monitoring and reporting requirements such as the tracking of cylinders containing regulated substances.

*e. Final rule should embrace certification and ignore tracking*

HARDI agrees with the agency in the value of a certification program by assuring the product was produced or imported legally; however, the reasons provided by EPA do not show the same value in developing a cylinder tracking system. EPA has expressed interest in using tracking to identify HFCs that did not enter the market legally, but it is only when a customer wants to determine if a product was produced or imported with an allowance that this process is successful. EPA can achieve this same goal by simply having a QR code or other scannable logo that points the user to a proof of certification without the need for additional tracking.

Tracking is also unlikely to lead to better enforcement. Based on history of enforcement actions taken under section 608 regulations it is unclear how tracking could lead to better compliance. The tracking system as currently written would not provide the data necessary for improved section 608 compliance and it is unlikely any tracking system the EPA has authority to implement could lead to future enforcement.

HARDI encourages EPA to promulgate a final rule containing the certification system without the

[47] *Id., 2.*

proposed tracking system. The proposed tracking system is unnecessary, burdensome, and beyond the authority of EPA to fully implement.

**5. Purpose of this Rulemaking**

This allocation rule is the first of many rules to be proposed regarding the phasedown of HFCs and we want to work with EPA staff to ensure future rules look at key issues that must be addressed including ensuring proper certification and training of technicians and contractors, increasing recovery for reclaim, and ensuring a robust reclaim market is available to supply our wholesale distributor members. Using the allocation rule for other purposes including reducing venting is an unwise rule development process. The allocation rule should focus on the allocation and allowance system only. Addressing industry comments on extraneous proposals will slow down the rule-making process when time is needed to prepare for the 2022 production year to meet market demand within the allocation allowances. As we have seen in previous phasedowns a perceived shortage of refrigerant can cause havoc on market prices for gases. These perceived shortages will be made worse by the fact that components of current HFCs will either be used as standalone refrigerants or as components in other low-GWP refrigerants.

It is also HARDI's opinion that while the discussion of compliance measures to reduce venting of gases is important, proposals to ban non-refillable cylinders or add excessive tracking burdens are unnecessary in the allocation rule. These types of proposals are best suited in a rule that looks specifically at all practices, processes, and activities associated with contractors and technicians installing and maintaining equipment as the best way to reduce venting. Only when we take a holistic approach to reducing venting can the industry adequately provide feedback to EPA on how best to improve the practices, processes, and activities that technicians are trained to use in the

field to reduce venting of refrigerants from equipment. HARDI does recognize that while some of these anti-venting proposals are also meant to reduce illegal importation of refrigerant gases which are valid in enforcing the allocation rule, we believe these proposals go above and beyond any sensible proposals that could easily decrease illegal imports while having less of a negative impact on good industry actors.

**6. Conclusion**

HARDI thanks EPA for soliciting feedback on this important proposed rule. While we vehemently disagree with some of the ancillary proposals contained in the rulemaking, we do fully support the allowance and allocation process and believe this is a necessary component to the success of the HFC phasedown authorized under the American Innovation and Manufacturing Act.

Sincerely,

Alex Ayers
Director of Government Affairs
Heating, Air-conditioning, & Refrigeration Distributors International