

March 27, 2026

Katrina Kessler, Commissioner
Minnesota Pollution Control Agency (MPCA)
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Submitted via the MPCA rulemaking comment portal

Re: MPCA Request for Comments on Draft Rule Concept Summary for PFAS in products: Currently unavoidable use (CUU) rule

Dear Commissioner Kessler:

The Air-Conditioning, Heating, and Refrigeration Institute (AHRI) appreciates the opportunity to submit comments to the Minnesota Pollution Control Agency (MPCA) in response to the Draft Rule Concept Summary for Per- and polyfluoroalkyl substances (PFAS) in products: CUU rule, published on February 26, 2026.

AHRI represents more than 330 manufacturers of heating, ventilation, air conditioning, refrigeration (HVACR) and water heating equipment. It is an internationally recognized advocate for the HVACR and water heating industry and certifies the performance of many of the products manufactured by its members. In North America, the annual economic activity resulting from the HVACR and water heating industry is more than \$211 billion. In the United States alone, AHRI member companies, along with distributors, contractors, and technicians employ more than 704,000 people. In Minnesota, the HVACR and water heating industry supports more than 16,000 jobs.

AHRI and its members are committed to reasonable PFAS management that supports human health and the environment while protecting the jobs and the products that are essential to our society's well-being.

In the following comment letter, we will provide responses to MPCA's draft rule concept summary on various points that will help the agency develop regulations that will protect human health and the environment, as well as jobs, businesses, and products that are essential to societal well-being. We ask that MPCA consider these comments carefully to prevent AHRI members' essential products from being banned from distribution in Minnesota, commencing January 1, 2032.

I. Introduction

AHRI supports MPCA's efforts to reduce harm to human health and the environment. We recognize there is precedent among controlling agencies at the international, federal, and state level for providing "critical use" or "currently unavoidable use" exemptions as these entities recognize the unique challenges associated with the PFAS family of over 12,000 unique chemicals.

For the regulated community, even simple chemical substitutions can take years and cost millions of dollars. The chemical substitution process requires identifying chemicals in a complex, global supply chain, trying to find a viable alternative (if one is available), and then initiating the complicated, time-consuming, and expensive process of product redesign. Product redesigns include research, development, testing, certification, and implementation which is a lengthy process of several years as this

equipment is subject to mandatory testing (e.g., for energy efficiency, safety, earthquake, reliability, and in some cases, food safety etc.) for even a single chemical change.

For these reasons, we urge MPCA to consider not only human health and the environment but also business continuity and survival when proposing new, burdensome, or potentially unachievable mandates for essential equipment. This is especially true for vulnerable small businesses, who have labor and financial constraints, which cannot support the proposed compliance timelines and mandates. Government and industry must work together to develop deliberate, effective, thoughtful, and reasonable approaches to PFAS management.

II. Specific Comments in Response to MPCA's Request

1. Who is commenting?

Response: Other – trade association.

2. If you are commenting as a representative, what is the name of the entity you are commenting on behalf of?

Response: Air Conditioning, Heating, and Refrigeration Institute (AHRI).

3. If you represent a product manufacturer or industry group, what industry(ies) do you represent?

Response: The heating, ventilation, air conditioning, refrigeration (HVACR) and water heating industry.

4. If you represent a product manufacturer, what types of components, products, or product categories do you manufacture that you will be requesting a CUU determination for?

Response: N/A

5. Do you have any recommended changes or other considerations that you think the MPCA should take into account when defining the term "essential for health, safety, or the functioning of society" (Please review the proposed definitions prior to answering)

Response: AHRI asks that MPCA recognize that HVACR and water heating equipment, and the refrigerants within, meet the criteria for "essential for health, safety, or the functioning of society." See our explanation in response to Question #11 of the U.S. Environmental Protection Agency's (EPA) Significant New Alternatives Policy (SNAP) Program, which provides a risk-based approach to evaluating and approving uses of chemicals that are essential for the functioning of society. This equipment is necessary to maintain building habitability and support critical infrastructure such as medical facilities, schools, and nursing homes. Climate control systems protect vulnerable populations during extreme heat and cold, maintain indoor air quality in educational and healthcare facilities, and ensure continuous operation of telecommunications and data infrastructure. Certain fluorinated materials are used in limited but critical applications within HVACR and water heating equipment, including refrigerants, high-performance gaskets, seals, electrical insulation, coatings, and components exposed to high pressures, temperature cycling, refrigerants, lubricants, and corrosive environments. In many cases, the absence of these materials would compromise safety, durability, or code compliance, rendering this equipment unusable and causing the product's service to be unavailable to society. HVACR and water heating equipment is essential for the health, safety, and functioning of society, and AHRI asks that MPCA explicitly acknowledge this in the CUU rule.

To lessen the burden on the regulated community, AHRI asks MPCA to harmonize with enacted laws and regulations of other states as much as possible. For example, MPCA could consider using the definition found in Maine's Section 1614 of Title 38, which defines "Essential for Health, Safety or the Functioning of Society" as:

Products or product components that if unavailable would result in a significant increase in negative healthcare outcomes, an inability to mitigate significant risks to human health or the environment, or significantly interrupt the daily functions on which society relies. Products or product components that are Essential for Health, Safety or the Functioning of Society include those that are required by federal or state laws and regulations. Essential for the Functioning of Society includes but is not limited to climate mitigation, critical infrastructure, delivery of medicine, lifesaving equipment, public transport, and construction.

6. Do you have any recommended changes or other considerations that you think the MPCA should take into account when defining the term "alternative"? (Please review the proposed definitions prior to answering)

Response: AHRI recommends that when defining "alternative," MPCA consider the durability of an alternative over its expected service life. HVACR and water heating systems' useful product life commonly ranges from 15 to 25 years. Substituting a material that performs adequately in short-term testing, but degrades prematurely under field conditions, could increase equipment failure rates, waste generation, and lifecycle greenhouse gas emissions, as well as increase the frequency of which products or components must be replaced. Durability over expected service life must be considered when defining if an "alternative" would result in a functionally equivalent product. If the "alternative" significantly decreases the expected service life, then it is not a feasible alternative. MPCA must also consider an "alternative[s]" compatibility within a product. A non-PFAS "alternative" must be compatible with refrigerants and lubricants within the HVACR or water heating product, meet applicable safety certifications and building codes, and perform under extreme environmental conditions.

In the proposed definition, MPCA does not consider an "alternative[s]" cost to consumers. An evaluation of costs to consumers is critical for complex durable goods with an expected lifespan of 15 to 25 years. MPCA must include a cost analysis that considers downstream operating costs, including energy bills, system redesign, and recertification costs, not just the material price of the good. Non-PFAS substitutes can increase energy consumption and total cost of ownership, which ultimately raises household and small business costs. Incorporating these feasibility and lifecycle factors into the evaluation of "alternative[s]" will help ensure substitutes are technically viable, compliant, and affordable in practice.

Many HVACR and water heating products are required to meet federal efficiency standards, pursuant to the Energy Policy and Conservation Act of 1975 (EPCA). MPCA must consider that a non-PFAS "alternative" must not hamper HVACR and water heating products' ability to meet these requirements. In consideration of the federal statutory requirements that HVACR and water heating products must meet, AHRI proposes that the "alternative" definition be modified to include the additional language and read as follows (emphasis added):

"Alternative" means a non-PFAS chemical, substance, material, manufacturing process change, non-chemical change, component with equivalent ratings and use conditions, or product intended for similar use, application or installation, that, if used in place of a PFAS or PFAS-containing product, would result in a functionally equivalent product.

AHRI recommends that MPCA clarify the definition of "product," as used in the proposed definition in "alternative." If "product" in this context is defined the same as it is in Chapter 116, Section 116.943, of the 2025 Minnesota Statutes (Products Containing PFAS), then it is

unrealistic to require that HVACR and water heating manufacturers conduct a full assessment of alternatives as these products contain hundreds of parts and components that are often supplied by Tier 3 suppliers.

7. Do you have any recommended changes or other considerations that you think the MPCA should take into account when defining the term "reasonably available"? (Please review the proposed definitions prior to answering)

Response: Similar to AHRI's recommendation for defining "alternative," MPCA must consider the durability and lifespan of a non-PFAS alternative when defining "reasonably available." In MPCA's proposed rule concepts, it proposes to define "reasonably available" as an "alternative to a PFAS that can perform comparable to the PFAS being considered for replacement in a product or component." MPCA must consider that HVACR and water heating systems useful product life is between 15 to 25 years. A non-PFAS alternative is not "reasonably available" if it significantly shortens the intended lifespan of the product or component that contains PFAS.

A non-PFAS alternative must meet the applicable safety requirements for HVACR and water heating equipment as well, including evaluations of the alternative's toxicity and flammability. While a non-PFAS alternative may be used for a similar function in another product, it may not meet the applicable safety requirements that govern HVACR and water heating equipment. MPCA must consider that a "reasonably available" alternative must satisfy the amalgamation of requirements with which HVACR and water heating equipment must comply.

While cost alone should not determine whether an alternative is "reasonably available," MPCA must consider the commercial feasibility and ability to provide essential infrastructure equipment at scale when evaluating whether a non-PFAS alternative is "reasonably available." The cost of transitioning to a non-PFAS alternative may make the product or component economically non-viable, which risks denying access to essential products for many Minnesotans.

AHRI asks MPCA to consider using the definition found in Maine's Section 1614 of Title 38, which defines "reasonably available" as follows:

A PFAS alternative which is readily available in sufficient quantity and at a comparable cost to the PFAS it is intended to replace and performs as well as or better than PFAS in a specific application of PFAS in a product or product component.

8. When considering the proposed definition of "product category", how broadly should the agency group product categories? (Examples: "vehicles" versus "sedans, SUV's, vans, trucks, RV's" or "printers" versus "receipt printers, thermal printers, label printers, residential printers, commercial printers, etc.")

Response: AHRI supports MPCA's initiative to establish product categories and recommends that MPCA establish a category for "HVACR and water heating" to include heating (including space heating), ventilation, air conditioning, refrigeration (including transport), refrigerants, and water heating equipment and their components and parts including replacement parts, materials, and manufacturing and servicing needs.

HVACR and water heating systems are integrated assemblies comprised of numerous components that function together to provide safe and reliable operation. Duplicative component-level CUU determinations would create substantial compliance complexity and risk unintended disruption of replacement parts and service support for installed equipment.

9. Should each request for a CUU determination be limited to a single product category, or should applicants be allowed to submit a request for a CUU determination for multiple product categories?

Response: AHRI requests that MPCA create a product category for HVACR and water heating products, including all their components, which would streamline the need for a CUU to one product category. This would be the least burdensome for MPCA and HVACR and water heating manufacturers. For example, if MPCA required separate CUUs for a product and its internal components, it could create significant supply chain disruptions if MPCA were to approve the product's CUU but deny a product component's CUU. Thus, potentially denying Minnesotans access to HVACR and water heating products.

If MPCA does not create such a product category, AHRI requests that applicants be allowed to submit a CUU determination request for multiple product categories at once. The PFAS-containing component may serve the same purpose in various products, but the products are not considered substitutes for each other. For example, refrigerants that may be considered PFAS are used similarly across many product types (i.e., air conditioning and refrigeration), but these products cannot be used interchangeably. MPCA should allow applicants to submit CUU determination requests for multiple product categories.

10. What safety or other standards require the use of PFAS in a product? (Please include the specific citation)

Response: One single standard may not require the use of PFAS, but often products are not subject to just one standard or regulation. Safety standards, performance standards, and building codes generally do not specify that a product uses a certain chemical formulation; however, the result of multiple standards governing the same product may be that compliance with all applicable standards and regulations necessitates the use of a PFAS for which there are no currently viable alternatives.

11. The agency is seeking feedback on the potential that the initial positive CUU determination duration for existing products will expire eight years from the date of issuance regardless of product category. This is intended to stagger renewal deadlines and ease the administrative burden of processing renewals. Do you have any concerns about unintended consequences with this proposal? Do you have any alternative recommendations to stagger renewal deadlines?

Response: Product redesign, validation, safety testing, reliability testing, and certification cycles in the HVACR and water heating sector are lengthy and rigorous. Development timelines are influenced by safety listings, building code requirements, and federal efficiency standards. AHRI recommends that MPCA consider a longer initial CUU duration for essential infrastructure equipment, such as 10 years. Regulatory stability is important to avoid disruption of long product development and validation cycles. AHRI also recommends a streamlined CUU renewal process where no reasonably available alternatives have emerged. This is a commonsense modification that would alleviate the compliance burden on manufacturers and the evaluation process undertaken by MPCA staff.

While AHRI understands MPCA's efforts to stagger renewal deadlines, AHRI proposes that positive CUU determinations expire from the PFAS prohibition effective date of January 1, 2032. If the positive CUU determination expires from the date of CUU issuance, it creates a disincentive to apply early for a CUU designation. This defeats MPCA's intended purpose of easing the administrative burden of processing CUU requests.

AHRI supports a risk-based approach to PFAS regulation, wherein the regulatory body focuses its efforts on high-risk, high-exposure PFAS first. AHRI recommends that MPCA identify and exempt critical PFAS uses that the federal government has authorized through the EPA SNAP Program. The SNAP Program allows the EPA to evaluate substitutes for ozone-depleting substances and hydrofluorocarbons (HFCs) targeted by the American Innovation and Manufacturing (AIM) Act. This program helps identify safer alternatives to reduce environmental and health risks. These critical uses have already undergone evaluation and approval by EPA, and automatically exempting these uses from the CUU process will ease administrative and regulatory burden without hampering MPCA's pursuit of protecting human and environmental health.

- 12. The MPCA has developed a preliminary list of potentially eligible data categories that may be considered for trade secret requests. (Please review the list of potentially eligible data prior to answering) • Do you have any concerns about unintended consequences with this proposal? • Do you have any alternative recommendations for data that should or should not be eligible for trade secret requests?**

Response: AHRI recommends that MPCA establish a category titled "Other," which will capture additional information that could be a trade secret, but is not explicitly stated in the rule.

- 13. What are the potential ongoing costs to society if the commissioner issues a positive currently unavoidable use determination for the continued use of PFAS within a product or product category? (For example: environmental, human health, or remediation costs)**

Response: AHRI members will submit individual responses to question 13.

- 14. For manufacturers: Administrative cost of requesting a CUU determination (Part 1 of 2). Please provide your best estimates or rough orders of magnitude (for example "approx. 200 hours"). Precise accounting data is not necessary to answer this question. If your company currently possesses information regarding intentionally added PFAS (to the CAS number level) for all components in your product lines, please estimate the number of technical staff hours that were required to establish this baseline. • Not applicable • Less than 40 hours • 40 to 100 hours • 101 to 500 hours • More than 500 hours • Other (please specify)**

Response: AHRI members will provide individual comments regarding their best estimates for the number of technical staff hours that were required to identify PFAS, by its CAS number, in all components in their products.

- 15. For manufacturers: Administrative cost of requesting a CUU determination (Part 2 of 2). Please provide your best estimates or rough orders of magnitude (for example "approx. 200 hours"). Precise accounting data is not necessary to answer this question. If your company does not possess information regarding intentionally added PFAS (to the CAS number level) for all components in your product lines, please estimate the number of technical staff hours needed to obtain this data from your Tier 2 or 3 suppliers for a single product line. • Not applicable • Less than 40 hours • 40 to 100 hours • 101 to 500 hours • More than 500 hours • Other (please specify)**

Response: HVACR and water heating equipment incorporates numerous sourced components, often from multiple tiers of suppliers. Establishing CAS-number-level mapping for intentionally added PFAS across product lines requires substantial supplier coordination and technical review. For complex product lines, developing a comprehensive baseline inventory could require thousands of technical staff hours. Obtaining detailed information from Tier 2 and Tier 3 suppliers for even a single product platform will require a significant amount of time and resources. Allowing consolidated, category-based CUU submissions—particularly through trade associations—would

meaningfully reduce duplicative administrative burden. AHRI members will provide comments regarding their best estimates for the amount of technical staff hours that would be required to identify PFAS, by its CAS number, in all components in their products.

- 16. For manufacturers: Expenditure considerations when seeking non-PFAS alternatives (Part 1 of 2). Please provide your best estimates or rough orders of magnitude (for example "primary cost is CapEx"). Precise accounting data is not necessary to answer this question. If you have identified a technically viable non-PFAS alternative for one of your products that contains intentionally added PFAS, does implementing this alternative require Capital Expenditure (such as purchasing new molds, retooling machinery) or primarily Operational Expenditure (such as purchasing more expensive raw materials)? • Please estimate the ratio of Capital Expenditure to Operational Expenditure (or indicate which category is the dominant cost driver).**

Response: AHRI members will submit individual responses to question 16.

- 17. For manufacturers: Expenditure considerations when seeking non-PFAS alternatives (Part 2 of 2). If you have not identified a technically viable non-PFAS alternative for one of your products that contains intentionally added PFAS, have you conducted a Research & Development (R&D) feasibility study? • If so, what was the cost of that study?**

Response: AHRI members will submit individual responses to question 17.

- 18. For manufacturers: Research and development safety validation cycles. • What is the typical duration of the R&D and safety validation cycle for a reformulated product in your sector (from concept to market entry)? • Does this cycle align with the 5-year renewal period typically associated with regulatory exemptions? • If not, please explain the specific technical barriers that would require a longer validation period.**

Response: AHRI members will submit individual responses to question 18.

- 19. Please provide any additional information or documentation needed to support your answers to any of the questions posed.**

Response: AHRI has no additional comments on question 19.

- 20. Do you have any additional questions or comments regarding the PFAS in products: Currently unavoidable use rule? (Please note that we may be unable to respond to specific questions regarding rule content in this phase of the rulemaking process)**

Response: See additional comments detailed below.

Confidential Business Information

AHRI supports robust protection of confidential business information, including chemical identity and concentration, engineering redesign strategies, reformulation plans, and supplier and supply chain information. Public disclosure of this information could compromise proprietary innovation and competitive positioning without advancing the objectives of the rule.

Exemption for Servicing and Replacement Parts

AHRI recommends that MPCA consider providing an exemption for both servicing and replacement parts. Many manufacturers are required to maintain servicing and replacement parts for years to ensure that consumers' products can continue to remain operational and meet

warranty demands. It is not economically feasible for manufacturers to redesign and produce servicing and replacement parts years after they were originally made, because many of these parts are no longer being actively manufactured. For companies to meet legal and consumer requirements, AHRI requests that MPCA provide a fifteen-year exemption for all replacement parts.

Streamlined CUU Requests

AHRI recommends that MPCA streamline the CUU request process when manufacturers request a CUU determination for a product within a product category that has already received a positive CUU determination. Requiring manufacturers to complete the application process for a product of which another manufacturer has already received a positive CUU determination is unnecessary and overly burdensome for MPCA and the manufacturer. Streamlining this process will alleviate the regulatory burden on MPCA and manufacturers, as well as lessen the risk that Minnesotans will lose access to essential products that could be held up in this unnecessary regulatory process.

MPCA must consider the continued servicing needs of HVACR and water heating equipment as well. Servicing and replacement parts are incorporated into equipment as needed to maintain the safe and proper functioning of the HVACR and water heating product. If MPCA does not grant an exemption for servicing and replacement parts, these should be considered as part of the same CUU request as the product itself. This will avoid duplicative CUU requests and an onerous administrative process to evaluate multiple CUU requests for a product, and its servicing and replacement parts.

CUU Statutory Deadlines

The proposed rule concepts include statutory deadlines for manufacturers, but it does not require MPCA to maintain an application processing schedule. The rule states that a manufacturer who has applied for, but has not received, a positive CUU determination before the January 1, 2032, deadline may not sell product in Minnesota until such determination is made. While MPCA is proposing a January 1, 2030, deadline for “existing products” to submit CUU requests, it does not alleviate the concerns that MPCA may be delayed in reviewing these applications, thus causing a lapse in access to essential products. AHRI requests that the CUU rule includes a CUU application review timeline to ensure that determinations are made in a timely manner.

Grouped CUU Requests

AHRI strongly supports explicit allowance for industry associations, such as AHRI, to submit CUU requests on behalf of multiple member manufacturers for shared product categories. HVACR and water heating manufacturers design products to common safety and performance standards. The technical basis for certain PFAS uses is often substantially similar across manufacturers. Requiring duplicative, company-by-company CUU filings would increase administrative burden for both manufacturers and MPCA without improving protections for human health or the environment. AHRI recommends that an industry association be permitted to submit a consolidated CUU request for a defined product category; participating manufacturers would certify the accuracy of information submitted on their behalf; and the resulting determination would apply to all listed manufacturers. This approach would streamline review, promote consistency, and reduce redundancy.

Consideration for Complex, Durable Goods

Through the proposed rule concept, there is a lack of consideration for PFAS in complex durable goods, such as HVACR and water heating equipment. These products present a significantly

different risk to consumers since many of the components that may contain PFAS are hermetically sealed and not accessible to consumers under normal operation. Plus, HVACR and water heating products present a low risk of environmental contamination since: 1) the servicing, handling, and disposal of the PFAS-containing components is regulated by the EPA; and 2) the servicing, handling, and disposal of the PFAS-containing components is done by a licensed professional, not a consumer. The proposed rule concepts treat all PFAS and their uses equally. MPCA must consider streamlining CUU determinations for low-risk, low-exposure PFAS applications. AHRI recommends that MPCA include a definition for "complex durable goods." AHRI recommends MPCA incorporate the definition used in New Mexico's 20.13.2 Per- and Poly-Fluoroalkyl Substances in Consumer Products (Title 20, Chapter 13, Part 2), which reads as follows:

"Complex durable good" means a product that is a manufactured good composed of 100 or more manufactured components, with an intended useful life of five or more years, where the product is typically not consumed, destroyed, or discarded after a single use.

III. Conclusion

The decisions made during this formative period will set the precedent for years and perhaps decades to come. To ensure the smoothest path forward for all affected parties, we need to work together now.

MPCA should continue to engage the regulated community by convening workshops, providing comment opportunities (with sufficient notice), disseminating information, and providing timely, regular updates.

Thank you for allowing us to provide our information. Please feel free to contact us directly if you have questions or need additional information.

Sincerely,



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