

December 1, 2025

**VIA ELECTRONIC MAIL ([HFCtransitions@epa.gov](mailto:HFCtransitions@epa.gov) & [newberg.cindy@epa.gov](mailto:newberg.cindy@epa.gov))**

Hon. Lee Zeldin, Administrator  
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Attn: Cindy Newberg, Director  
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**Re: U.S. EPA, *Restrictions on the Use of Certain Hydrofluorocarbons under the American Innovation and Manufacturing Act of 2020: Phasedown of Hydrofluorocarbons; Final Rule*, 88 Fed. Reg. 73,098 (Oct. 24, 2023) (2023 Rule) Petition to Extend Transition Period for Automatic Commercial Ice Machines**

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Dear Hon. Zeldin and Ms. Newberg:

By this letter and pursuant to 42 U.S.C. § 7675(i)(3) and 40 C.F.R. § 84.62, the North American Association of Food Equipment Manufacturers (NAFEM), along with the undersigned signatories (Signatories),<sup>1</sup> respectfully petition the U.S. Environmental Protection Agency (EPA) to extend the transition periods under the American Innovation and Manufacturing Act (AIM Act) specific to automatic commercial ice machines (ACIM) by three years—i.e., from January 1, 2026, and January 1, 2027, to January 1, 2029, and January 1, 2030, respectively. See 40 C.F.R. §§ 84.54(a)(8) (self-contained ACIM), 84.54(c)(14) (remote condensing ACIM).

**NAFEM and the Signatories request that EPA promptly grant this Petition as quickly as possible because the earliest unworkable restrictions on ACIM begin on January 1, 2026.**

Set forth below, we outline (I) the interests of NAFEM and the Signatories; (II) the regulations of the AIM Act and the 2023 Rule specific to this Petition; and (III) the basis for NAFEM's and the Signatories' Petition to extend the transition periods as to ACIM by three years.

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<sup>1</sup> The signatories to this Petition are set forth in [Appendix A](#).

**I. INTERESTS OF NAFEM AND THE SIGNATORIES**

**A. NAFEM**

NAFEM is a trade association of more than 600 commercial foodservice equipment and supply manufacturers – a \$17 billion industry. These businesses, their employees, and the products they manufacture, support the food-away-from-home market – which includes more than one million locations in the U.S. and countless more around the world. NAFEM supports, and its members actively seek, opportunities to engage with EPA in the regulatory process to assure certainty and clarity to its regulated members that manufacture equipment relied upon by our society to safely provide food away from home.

NAFEM regularly participates in EPA's rulemakings, including providing comments in connection with the 2023 Rule. NAFEM's members include equipment manufacturers that are subject to EPA's AIM Act standards and the 2023 Rule. Therefore, NAFEM has a direct interest in this Petition, the AIM Act, and the 2023 Rule.

**B. The Signatories**

Since 1948, **Follett Products, LLC** has led the industry in designing and manufacturing high quality, innovative ice storage bins, ice storage and transport systems, ice machines, ice and water dispensers, ice and beverage dispensers, and medical-grade refrigerators and freezers for the foodservice and healthcare industries. Follett is based in Easton, PA and recently expanded operations in 2025 to include a manufacturing location in Englewood, CO. Our entire company is dedicated to providing the most customer-oriented service in the industry.

**Hoshizaki America, Inc.** (Hoshizaki) is one of the leading commercial ice maker manufacturers. Based in Georgia with manufacturing facilities in Peachtree City and Griffin, Hoshizaki prides itself in the strides it has made in energy efficiency, water efficiency, and environmental concerns. We strive for great quality, reliability, and energy efficiency leadership in the market. We have received the ENERGY STAR Partner of the Year award for thirteen consecutive years. Hoshizaki employs over 1,000 people related to the design, manufacture, and sale of commercial ice makers, commercial refrigerators/freezers, and other commercial kitchen equipment. Over 800 employees work at our manufacturing facilities in Georgia, and we have multiple distribution centers located throughout the United States. Environmental concerns are of utmost importance to Hoshizaki, and we devote resources to ensure we do not just meet standards but exceed them.

**II. RELEVANT AIM ACT REGULATIONS**

The AIM Act regulations relevant to this Petition are as follows:

(a) *No person may manufacture or import any product in the following sectors or subsectors that uses a regulated substance<sup>[2]</sup> as listed in this paragraph: . . . (8)*

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<sup>2</sup> "Regulated substance" "means a hydrofluorocarbon listed [in the] AIM Act and a substance included as a regulated substance by the Administrator under the" AIM Act. *Id.* § 84.3; see also *id.* § 84.52 ("For the terms not defined in this subpart but that are defined in § 84.3, the definitions in § 84.3 shall apply.").

***Self-contained automatic commercial ice machines as follows:***

*(i) **Effective January 1, 2026**, ice maker products with a harvest rate as determined in accordance with 10 CFR 431.134, using a regulated substance, or a blend containing a regulated substance, with a global warming potential of 150 or greater as follows:*

*(A) Batch type, as defined in 10 CFR 431.132, with a harvest rate less than or equal to 1,000 pounds of ice per 24 hours;*

*(B) Continuous type, as defined in 10 CFR 431.132, with a harvest rate less than or equal to 1,200 pounds of ice per 24 hours;*

*(ii) **Effective January 1, 2027**, batch type ice maker products, as defined in 10 CFR 431.132, with a harvest rate greater than 1,000 pounds of ice per 24 hours, as determined in accordance with 10 CFR 431.134, and continuous type ice machine products, as defined in 10 CFR 431.132, with a harvest rate greater than 1,200 pounds of ice per 24 hours, as determined in accordance with 10 CFR 431.134, using any of the following: R-402A, R-402B, R-404A, R-407A, R-407B, R-407C, R-407F, R-408A, R-410A, R-410B, R-411A, R-411B, R-417A, R-417C, R-420A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-426A, R-428A, R-434A, R-437A, R-438A, R-442A, R-507A, HFC-134a, R-125/290/134a/600a (55/1/42.5/1.5), RB-276, RS-24 (2002 formulation), RS-44 (2003 formulation), GHG-X5, G2018C, or Freeze 12;*

40 C.F.R. § 84.54(a)(8) (emphasis added).

*(c) No person may install any system, nor have any such system be installed through their position as a designer, owner, or operator of that system, in the following sectors or subsectors that uses a regulated substance as listed in this paragraph (c): . . . (14) **Effective January 1, 2027, automatic commercial ice machines with a remote condenser** using any of the following: R-402A, R-402B, R-404A, R-407B, R-408A, R-410B, R-417A, R-421A, R-421B, R-422A, R-422B, R-422C, R-422D, R-424A, R-428A, R-434A, R-438A, R-507A, R-125/290/134a/600a (55/1/42.5/1.5), RS-44 (2003 formulation), or GHG-X5.*

*Id.* § 84.54(c)(14) (emphasis added).

### **III. BASIS FOR THIS PETITION TO EXTEND ACIM-RELATED TRANSITION PERIODS**

#### **A. Background**

NAFEM's members and the Signatories manufacture both self-contained ACIM and remote-condensing ACIM. Both ACIM are unique relative to the other equipment and applications identified in the AIM Act and subject to restrictions under the 2023 Rule. Several of the particular challenges to ACIM manufacturers and the sector overall are outlined below.

## 1. Equipment Challenges

ACIM involves making a product through refrigeration (ice), and then harvesting that ice, which requires specialized equipment to move the finished ice from where it was produced into a holding area, where it must be stored within specific parameters. For ice to freeze uniformly across the evaporator, refrigerants must have a low temperature glide.<sup>3</sup> This is especially important in that, unlike most refrigeration products, ACIM requires a harvest step that usually involves heating the evaporators to release the ice after freezing. Without a low glide refrigerant to allow for uniform ice across the evaporator, the unit cannot harvest properly and remove all of the ice. This harvest failure can lead to possible freeze-ups and damage.

Put simply, ACIM is not only a unique refrigeration application, but rather a longer process with refrigeration as one part. As a result, ACIM requires complicated refrigeration systems. For example, ACIM evaporators are proprietary and not standardized parts that can be substituted through the broader refrigeration supply chain that may serve other sectors subject to the AIM Act. Ongoing supply chain and tariff challenges are particularly challenging for ACIM manufacturers because the parts and their suppliers are specialized and less common.

## 2. Refrigerant Challenges

In addition to these supply-chain and equipment challenges, there are a limited number of refrigerants that are suitable for ACIM. Historically, R-404A and R-134a have worked well for ACIM, depending on the system size. Both refrigerants have low temperature glide. The available refrigerants that both meet AIM Act requirements and perform like R-404A are very limited. Fundamentally, very few of these limited options also have low temperature glide.

Because of the lack of AIM Act-compliant refrigerants that are suitable for current ACIM, NAFEM's members and the Signatories that manufacture ACIM must expend significant resources and time on refrigerant and equipment testing and then overhauling product lines.

## 3. EPCA Test-Procedures Update Challenges

The current test procedure under the Energy Policy and Conservation Act (EPCA), 42 U.S.C. §§ 6291 *et seq.*, specific to ACIM was promulgated in 2022. See U.S. Department of Energy, *Energy Conservation Program: Test Procedure for Automatic Commercial Ice Makers*, 87 Fed. Reg. 65856 (Nov. 1, 2022). Its effective date was October 27, 2023—*i.e.*, it came into effect just three days after the 2023 Rule under the AIM Act was promulgated. Compounding this transition is another: the UL safety standard 563 for ACIM was sunset in September 2024,

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<sup>3</sup> "Low temperature glide" refers to the small difference in temperature that occurs between the start and end of evaporation or condensation in a refrigerant mixture, such as a zeotropic blend. A zeotropic blend is a mixture of two or more refrigerants that have different boiling points and therefore do not evaporate or condense at a constant temperature when under constant pressure. Unlike pure refrigerants, which boil or condense at a single temperature for a given pressure, zeotropic blends experience a gradual phase change over a temperature range. A "low temperature glide" means this range is small—typically less than a few degrees Celsius—so the refrigerant behaves almost like a pure substance. This feature is desirable in many systems because it simplifies heat exchanger design, improves temperature matching, and helps maintain consistent system performance and efficiency.

forcing the transition to new UL standard 60335-2-89.

Because of the EPCA test-procedures update and the transition to the new UL standard, ACIM manufacturers needed to secure laboratory time and space at Nationally Recognized Testing Laboratories (NRTLs) to test and ensure their product portfolio remains compliant. When changing to new refrigerants, manufacturers must subject their products to a full suite of testing to ensure compliance with safety, sanitation, and energy requirements. Now, with changes to flammable refrigerants, manufacturers must test for additional parameters including but not limited to ensuring that the components are spark proof.

However, as NAFEM and other Signatories report, the 2023 Rule (under the AIM Act) and the ongoing energy conservation standards and test procedures updates (under EPCA), all of which were released on a similar cadence, have caused significant backlogs at NRTLs. ACIM manufacturers do not own or operate these NRTLs, and increasing capacity cannot occur on the extremely short timeframe needed to test equipment to meet the imminent deadlines in the 2023 Rule under the AIM Act.

In a “normal” environment not impacted by supply-chain challenges and NRTL-space constraints, the product and refrigerant research and development cycle is as follows:

- Baseline testing;
- Charge determination testing with new refrigerant;
- Energy baseline testing;
- Fine tuning of replacement parts for optimal performance (e.g., changing out expansion valves, water valves, filters, dryers, compressors, and condensers);
- Full gamut of safety testing (e.g., regulatory standards and internal standards); and
- Pilot testing (after ordering new parts deemed necessary for optimal performance).

This full cycle previously was expected to last 3-6 months per model family if parts and refrigerants that met all applicable regulatory requirements and technical specifications were readily available. The EPCA test-procedures update and the new UL standard have more than doubled the testing time and require additional testing for part approval. These cycles often must be repeated in order to fully transition the product portfolio to meet new requirements.

#### **4. The Above Challenges Make it Impossible for ACIM Manufacturers to Modify their Product Portfolio by Applicable 2023 Rule Deadlines**

In sum, ACIM requires unique and complicated equipment, not “off-the-shelf” solutions; ACIM must use certain refrigerants with specific characteristics; and ACIM manufacturers must redesign their product portfolio to attempt to use available AIM Act-compliant refrigerants in the marketplace while simultaneously adapting their product portfolio to meet the new EPCA test procedure specific to ACIM and the new UL standard 60335-2-89. This is a perfect storm.

NAFEM member and Signatory Hoshizaki, one of the largest ACIM manufacturers in the United States, reports that the last refrigerant transition took over six years to plan and implement across their ACIM product portfolio. Here, the ACIM sector was given fewer than three or four years, depending on the harvest rate of the ACIM. See 88 Fed. Reg. 73,098 (Oct. 24, 2023) (eff. date Dec. 26, 2023); 40 C.F.R. §§ 84.54(a)(8) (Jan. 1, 2026 or Jan. 1, 2027 deadlines depending on harvest rate), 84.54(c)(14) (Jan. 1, 2027 deadline).

**Accordingly, NAFEM and the Signatories respectfully petition EPA to extend the transition periods by three years—i.e., from January 1, 2026, and January 1, 2027, to January 1, 2029, and January 1, 2030, respectively.** This extension would simply align the current 2023 Rule deadlines to the prior refrigerant-transition experience of the ACIM sector.

#### **B. Responses to AIM Act Factors and Elements for Considering Petitions**

NAFEM and the Signatories provide the following information to satisfy the factors and elements identified in the AIM Act<sup>4</sup> and its implementing regulations<sup>5</sup> to evaluate petitions:

- **42 U.S.C. § 7675(i)(4)(A)—“the best available data”**

NAFEM and the Signatories state that this Petition in its entirety, and comments submitted in connection with the 2023 Rule by NAFEM and/or any of the Signatories, which are incorporated as if fully set forth herein, constitute the “best available data.” NAFEM and the Signatories are willing and able to meet and confer with EPA should it seek additional data for this Petition.

- **42 U.S.C. § 7675(i)(4)(B)—“the availability of substitutes for use of the regulated substance that is the subject of the rulemaking or petition, as applicable, in a sector or subsector, taking into account technological achievability, commercial demands, affordability for residential and small business consumers, safety, consumer costs, building codes, appliance efficiency standards, contractor training costs, and other relevant factors, including the quantities of regulated substances available from reclaiming, prior production, or prior import”**

NAFEM and the Signatories incorporate Section III.A above as if fully set forth herein. NAFEM and the Signatories are aware of limited current refrigerants in the marketplace that: (i) meet AIM Act requirements; (ii) performs like R-404A; and (iii) has low temperature glide. All must be satisfied to fit the needs of ACIM. But available refrigerants alone are not sufficient.

For example, while Hoshizaki has found that certain refrigerants are available, Hoshizaki reports that the compliance bottleneck has been with available components. ACIM is a small and specialized sector, which requires parts specially designed to meet equipment needs. These specialized parts require their own tests, both for performance and energy. Put simply, ACIM

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<sup>4</sup> “In . . . making a determination to grant or deny a petition submitted under paragraph (3), the Administrator shall, to the extent practicable, factor in” those factors that are identified in this Section. See 42 U.S.C. § 7675(i)(4).

<sup>5</sup> “Each petition sent to the Administrator under subsection (i) of the AIM Act shall include the following elements,” which include the elements that are identified in this Section. See 40 C.F.R. § 86.42.

must meet both customer requirements and national regulatory requirements.

Backlogs in third-party approvals for both the parts placed into ACIM as well as the end products have further hampered the design process. New standards—including strict rules for use of highly flammable refrigerants in place of previously approved but non-flammable refrigerants—have caused confusion amongst part suppliers. This confusion has caused delay in reworking parts, and the rush to approve components under the new, stricter UL standard has further strained NRTL capacity. With NRTL capacity constrained due to factors outside of the ACIM sector's control, the ACIM sector simply cannot meet the 2023 Rule transition periods.

- **42 U.S.C. § 7675(i)(4)(C)—“overall economic costs and environmental impacts, as compared to historical trends”**

NAFEM and the Signatories incorporate Section III.A above as if fully set forth herein. All projects undertaken in the previous two years have been unexpectedly and significantly delayed because of: (a) design challenges relating to alternative refrigerants; (b) parts availability and shortage delays; and (c) third-party testing and other delays because of overloaded personnel, overloaded test facilities, and increased test requirements.

- **42 U.S.C. § 7675(i)(4)(D)—“the remaining phase-down period for regulated substances under the final rule issued under subsection (e)(3), if applicable”**

NAFEM and the Signatories incorporate Section III.A above as if fully set forth herein. NAFEM and the Signatories do not believe this factor is applicable because they are not aware if the AIM Act allowance phase-down would factor into the requirements of the ACIM sector here.

- **40 C.F.R. § 84.62(a)(1)—“The sector and subsector(s) for which restrictions on use of the regulated substance would apply”**

NAFEM and the Signatories incorporate Section III.A above as if fully set forth herein and are proposing an extension to transition periods applicable to the entirety of the ACIM sector. See 40 C.F.R. §§ 84.54(a)(8) (self-contained ACIM), 84.54(c)(14) (remote condensing ACIM).

- **40 C.F.R. § 84.62(a)(2)—“For each sector and subsector identified in a petition, the restriction on the use of a regulated substance through any of the following:**

**“(i) A global warming potential limit that will apply to regulated substances or blends containing regulated substances with global warming potentials at or above that limit”;**

**“(ii) Identification of the regulated substance(s) or blend(s) containing a regulated substance to be restricted and its global warming potential according to § 84.64”; or**

**“(iii) Another form of restriction with an explanation for why a restriction under paragraph (a)(2)(i) or (ii) of this section would not be appropriate.”**

NAFEM and the Signatories incorporate Section III.A above as if fully set forth herein. For such reasons, NAFEM and the Signatories do not believe this element is applicable because this

Petition concerns an extension to transition periods, not any modification as to the characteristics and/or identification of allowable regulated substances.

- **40 C.F.R. § 84.62(a)(3)—"For each restriction on the use of a regulated substance contained in a petition, the effective date on which the regulated substance use restriction would commence and information supporting the identified effective date."**

This Petition seeks to extend the transition periods under AIM Act specific to ACIM by three years—i.e., from January 1, 2026, and January 1, 2027, to January 1, 2029, and January 1, 2030, respectively. See 40 C.F.R. §§ 84.54(a)(8) (self-contained ACIM), 84.54(c)(14) (remote condensing ACIM). As to information supporting the identified effective dates, NAFEM and the Signatories incorporate the entirety of Section III above as if fully set forth herein.

- **40 C.F.R. § 84.62(a)(4)—"Address whether the Administrator [should] negotiate with stakeholders in accordance with the negotiated rulemaking procedure provided for under subchapter III of chapter 5 of title 5, United States Code, including an explanation of their position to support or oppose the use of the negotiated rulemaking procedure."**

NAFEM and the Signatories do not propose that EPA engage in negotiated rulemaking here. EPA has previously considered and declined that process in connection with the 2023 Rule. See 88 Fed. Reg. at 73,108 – 73,109. Similarly, NAFEM and the Signatories do not believe that negotiated rulemaking will be productive mindful of the short deadlines by which to act.

- **40 C.F.R. § 84.62(a)(5)—"For each requested restriction, to the extent practicable, information related to the considerations provided in subsection (i)(4) of 42 U.S.C. 7675 to facilitate the Agency's review of the petition."**

NAFEM and the Signatories incorporate the entirety of Section III above as if fully set forth herein. The factors “provided in subsection (i)(4) of 42 U.S.C. 7675” are addressed above.

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NAFEM and the Signatories look forward to continuing to engage with EPA concerning this Petition. Please contact the undersigned if NAFEM or the Signatories can provide any additional insight or assistance regarding this Petition.

Respectfully submitted,



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**APPENDIX A: SIGNATORIES TO PETITION**

1. Follett Products, LLC; and
2. Hoshizaki America, Inc.