The American Innovation and Manufacturing (AIM) Act

HFC Reclamation Workshop

APRIL 26, 2021
Agenda

- Welcome & Introductions
- The AIM Act and First Actions
- HFC Reclamation
- Open Dialogue
- Closing
Hydrofluorocarbons (HFCs)

- HFCs are used as replacements for ozone-depleting substances (ODS) in sectors including refrigeration, air conditioning, foam blowing, and fire suppression.
- HFCs are potent greenhouse gases with global warming potentials (GWPs) hundreds to thousands of times higher than carbon dioxide (CO₂).
- HFC use is growing rapidly worldwide.
A global HFC phasedown is expected to avoid up to 0.5°C of global warming by 2100.
The AIM Act establishes three main types of regulatory programs:

- Phase down HFC production and consumption
- Facilitate transition to next-generation technologies
- Management of HFCs

Certain provisions are similar to provisions in CAA Title VI, but there are clear differences, including:

- Includes a limited state pre-emption clause
- Provides targeted small business technology grants
# 18 Individual HFCs Listed in the AIM Act

<table>
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<tr>
<th>Chemical Name</th>
<th>Common Name</th>
<th>Exchange Value</th>
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<tbody>
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<td>CHF₃</td>
<td>HFC–23</td>
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HFC Phasedown Schedule

- Important 2021 statutory deadlines:
  - 270 days after enactment EPA to issue phasedown regulations = **September 23**
  - Less than **150** days to go
  - **By October 1** allocate allowances for 2022

<table>
<thead>
<tr>
<th>Date</th>
<th>Caps: Consumption &amp; Production</th>
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<tbody>
<tr>
<td>2022–2023</td>
<td>90 percent</td>
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<tr>
<td>2024–2028</td>
<td>60 percent</td>
</tr>
<tr>
<td>2029–2033</td>
<td>30 percent</td>
</tr>
<tr>
<td>2034–2035</td>
<td>20 percent</td>
</tr>
<tr>
<td>2036 &amp; after</td>
<td>15 percent</td>
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HFC Phasedown Allocation Rulemaking

- Rule will stand up allocation program
- Provide the methodology for distributing allowances
- Account for application-specific allowances listed in the Act:
  - metered dose inhalers
  - defense sprays
  - structural composite preformed polyurethane foam for marine & trailer use
  - etching of semiconductor material or wafers & cleaning of chemical vapor deposition chambers
  - mission-critical military needs
  - onboard aerospace fire suppression
Next Generation Technologies

- EPA authorized to restrict use of HFCs on a sector or subsector basis to support transition to next-generation technologies
- EPA must consider using negotiated rulemakings
  - If not using negotiated rulemaking, EPA must publish explanation
- Specified timelines:
  - grant or deny petitions within 180 days
  - promulgate final rules within 2 years from granting a petition
- As of April 13, 2021, EPA has received 5 petitions: AHRI (2), NRDC, AHAM, EIA
Management of HFCs

- EPA will establish a program for maximizing reclamation and minimizing releases of HFCs and their substitutes from equipment, and ensuring safety of technicians and consumers
  - Establish regulations to control, where appropriate, practices, processes, or activities regarding the servicing, repair, disposal, or installation of equipment
  - Consider using authority to increase opportunities for reclaiming HFC refrigerants
- EPA may coordinate with any other similar regulations (e.g., CAA 608 regulations)
- Subject to appropriations, EPA shall establish a grant program for small businesses for purchase of recycling, recovery, or reclamation equipment for HFC substitutes (e.g., HFO-1234yf), including for servicing motor vehicle air conditioners
First Actions

- Notice of Data Availability published 2/11; provided information on:
  - HFC production and consumption reported to the GHGRP and identified potential data gaps
  - Provided preliminary information on specific applications allowed under the AIM Act for allocations
- Stakeholder engagement
  - Public meeting with over 200 participants held 2/25, sector workshops 3/11-12
  - Participating in industry forums and individual meetings with industry and ENGOs
  - Meeting with other federal agencies (e.g., SBA, Commerce, DoD, State, NASA, FDA) and States (e.g., CARB, Maryland, USCA)
First Actions

- Notice of proposed rulemaking (NPRM) provided to OMB 3/26
- EPA requested expedited review
  - Planning for a 45-day comment period, including a public hearing
- Rule will stand up allocation program, provide criteria for which entities may receive allowances, and set up methodology for distributing allowances
- EPA will issue a regulatory impacts analysis that includes the benefits-costs and environmental justice and other technical support documents
HFC Reclamation
There are currently 57 reclaimers certified under CAA section 608.

- Reclaimers vary from those that reclaim small amounts of ODS and HFCs annually or are locally focused, to regional and national reclaimers.

- Over the past ten years there have been new entrants as well as some consolidation among existing reclaimers.

- Since EPA started collecting data on reclaimed HFCs, HFC reclamation has grown by 20% (2017-2019).
Questions for Discussions

- What are the current practices for reclaiming HFCs? Are there any new technologies/practices under development or in use in the past few years?
- How is virgin material used by reclaimers?
  - Relative quantity needed to rebalance blends?
  - Relative quantity used for blending up to address impurities?
- How are patented refrigerants treated?
- Are there barriers to using reclaimed HFCs for first charging equipment? For aerosol filling? For foam blowing?
- To what extent are refillable cylinders used?
- What challenges and opportunities do reclaimers anticipate as HFCs are phased down?
- Are there additional data EPA should consider?
Reminders

- Unless called to speak, please keep your speaker on **MUTE**
  - If joining by phone, unmute by entering *6

- During Q&A session:
  - Raise your **HAND** to ask to speak
  - Open **CHAT** to submit questions or ask to speak
  - Please indicate your **NAME** and **AFFILIATION**
  - Please be mindful of time to allow others opportunity to ask questions or speak

- If your internet connection is unstable, turning off your **VIDEO** might help
Closing