



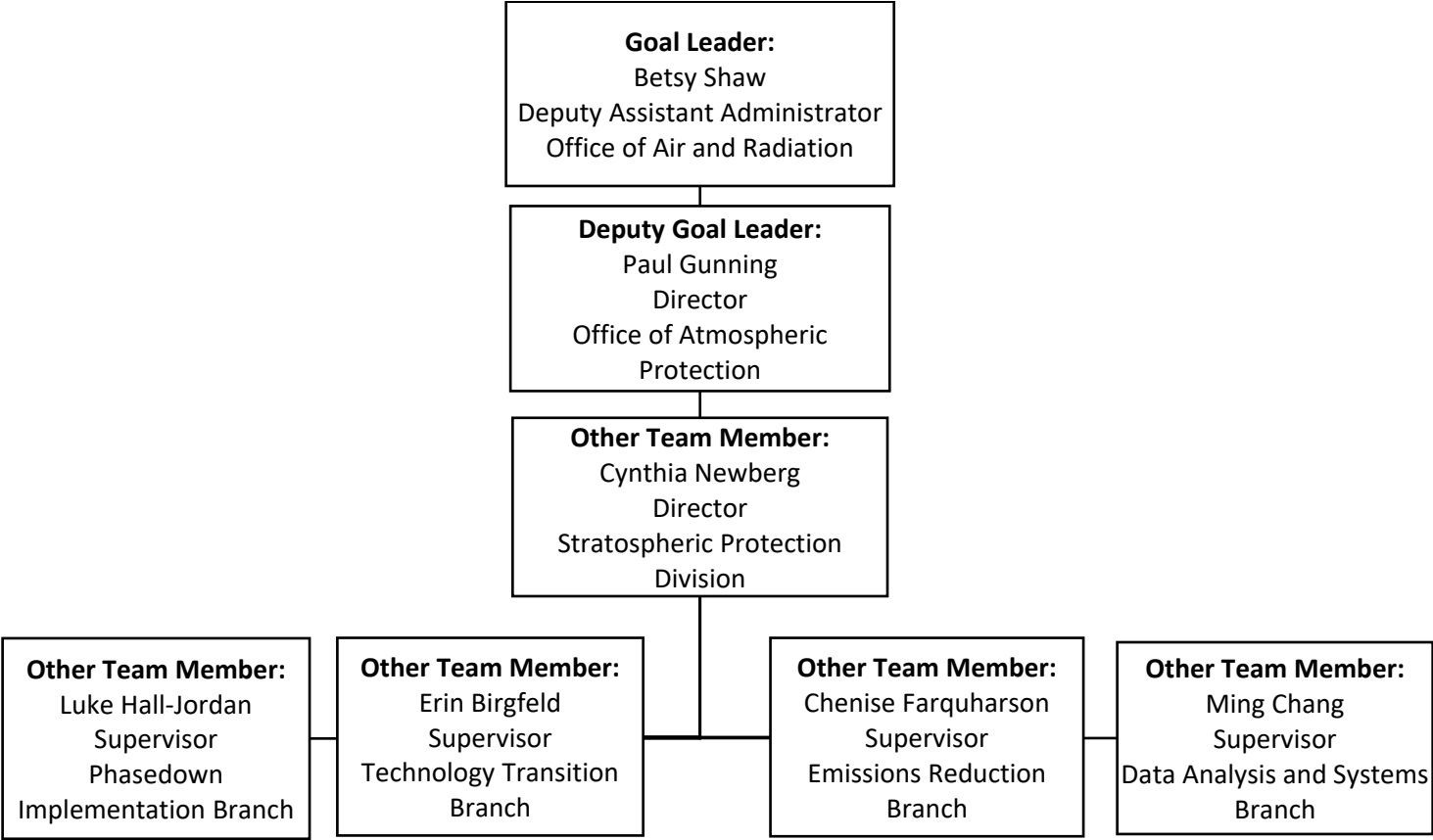
Agency Priority Goal | Action Plan | FY23 – Q4

Phase Down the Production and Consumption of Hydrofluorocarbons (HFCs)

Goal Leaders:

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Goal Team



Goal Overview

Goal Statement

- **Phase down the production and consumption of hydrofluorocarbons (HFCs).** By September 30, 2023, annual U.S. consumption of HFCs will be 10% below the baseline¹ of 303.9 million metric tons of carbon dioxide equivalent (MMT_{CO₂e})² consistent with the HFC phasedown schedule in the American Innovation and Manufacturing (AIM) Act and codified in the implementing regulations. A 10% reduction would decrease the U.S. consumption limit to less than 273.5 MMT_{CO₂e} in 2023.

Problem to Be Solved

- HFCs are potent greenhouse gases (GHGs), many of which have global warming potentials (GWPs) hundreds to thousands of times that of carbon dioxide.
- HFCs are commonly used in many sectors of the economy, and can be found in refrigeration and air conditioning, aerosols, solvents, fire suppression, and foam blowing agents. HFCs were developed to replace ozone-depleting substances (ODS).
- The AIM Act prescribes a schedule to phase down 85% of HFC production and consumption by 2036 through an allowance allocation and trading program managed by EPA.

What Success Looks Like

- Phasing down HFCs globally is expected to avoid up to 0.5° Celsius of global warming by 2100.
- Successful implementation of the AIM Act's phasedown of HFCs will also demonstrate EPA's commitment to implementing bipartisan climate legislation and advancing the Administration's goal of tackling the climate crisis.

¹ The HFC consumption baseline of 303.9 million metric tons of exchange value equivalent (MMTEVe) was established in a final rule published on October 5, 2021, "Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program Under the American Innovation and Manufacturing Act." The FY 2023 target is based on that consumption baseline. Subsequently, in a final rule signed in June 2023, "Phasedown of Hydrofluorocarbons: Allowance Allocation Methodology for 2024 and Later Years," EPA amended the consumption baseline based on corrected data. The revised consumption baseline is 302.5 MMTEVe. Beginning in 2024, the phasedown consumption steps will be measured from this HFC consumption baseline.

² EPA has determined that the exchange values included in subsection (c) of the AIM Act are identical to the GWPs included in IPCC (2007). Therefore, one million metric tons of carbon dioxide equivalent (MMT_{CO₂e}) is numerically equivalent to one MMTEVe. EPA is using the measurement MMT_{CO₂e} in this document since the public is more familiar with this term than MMTEVe.

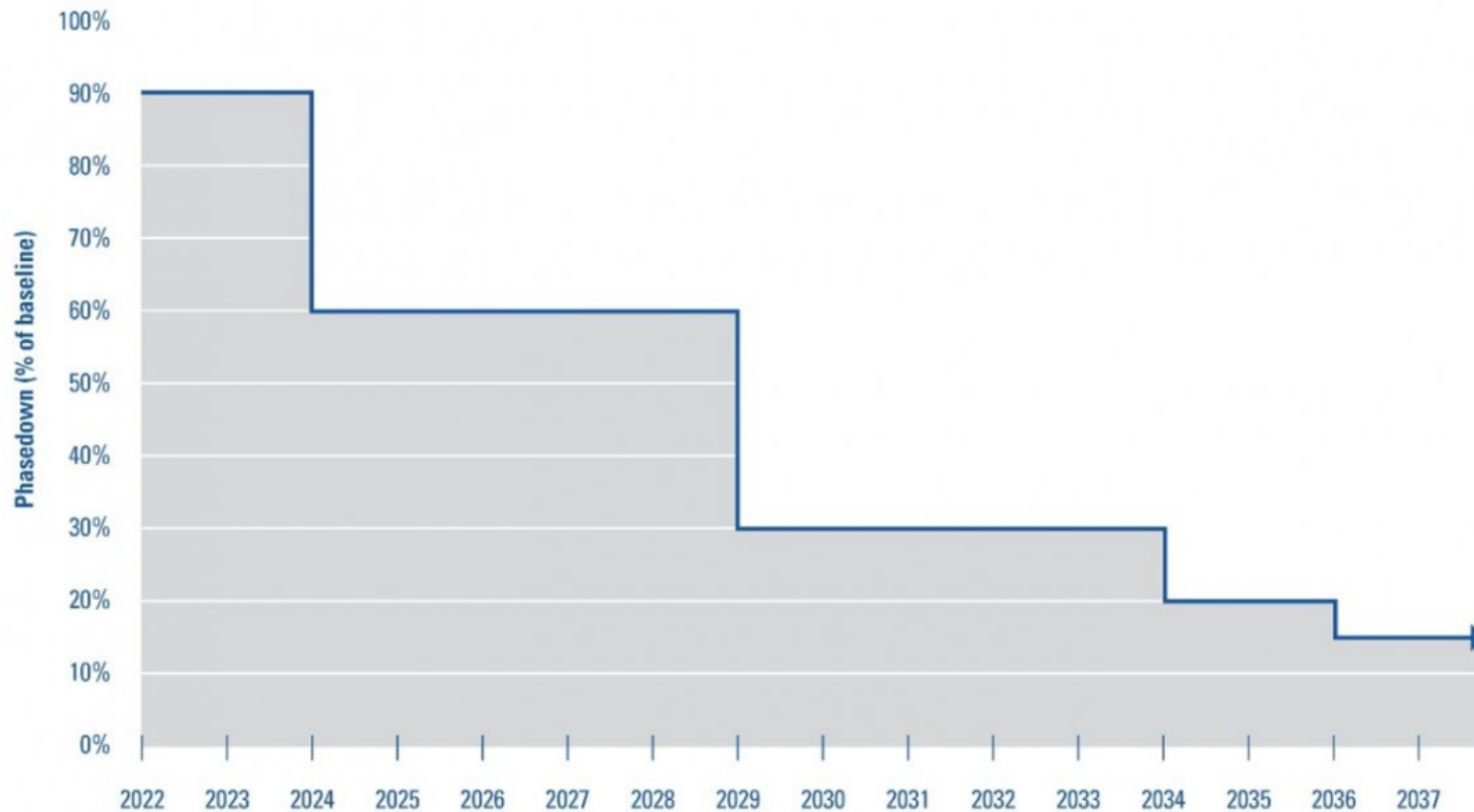
Goal Overview

- The AIM Act and EPA's implementing regulations provide the legal framework to phase down HFC production and consumption consistent with the Kigali Amendment to the *Montreal Protocol on Substances that Deplete the Ozone Layer* (Montreal Protocol).

Goal Overview

Phasedown Schedule

The following illustrates the HFC production and consumption phasedown schedule as outlined in the AIM Act.



Goal Target

 Tracking the goal

Achievement Statement		Key Indicators	Quantify Progress			Frequency
By...	We will...	Name of Indicator	Target Value	Starting Estimate	Current Estimate	Update Cycle
09/30/2023	By September 30, 2023, annual U.S. consumption of hydrofluorocarbons (HFCs) will be 10% below the baseline of 303.9 MMTCO _{2e} , consistent with the HFC phasedown schedule in the American Innovation and Manufacturing (AIM) Act and codified in the implementing regulations. A 10% reduction would decrease the U.S. consumption limit to less than 273.5 MMTCO _{2e} in 2023.	Remaining U.S. consumption of HFCs ³	273.5	303.9	253.4 (FY 2022 is latest available data)⁴	Annually

The FY 2023 target of 273.5 MMTCO_{2e} is 10% below the regulatory baseline (i.e., the starting estimate) of 303.9 MMTCO_{2e} as established in the October 2021 final rule, “Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program Under the American Innovation and Manufacturing Act.”

Historic estimates for years prior to the effective date of the regulations (i.e., data for years prior to FY 2022, including the current estimate) are derived from a number of sources: EPA’s Greenhouse Gas Reporting Program (40 CFR Part 98), import records provided to Customs and Border Protection through their Automated Commercial Environment database, responses from producers and importers to direct outreach from EPA, the proposed rule (“Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program Under the American Innovation and Manufacturing Act” [86 FR 27150; May 19, 2021]), and the Notice of Data Availability (“Notice of Data Availability Relevant To Petition Submissions Under the American Innovation and Manufacturing Act of 2020” [86 FR 28099; February 11, 2021]). Values for FY 2017–2021 are/will be equal to “net supply” which means the quantities of bulk HFC produced + imported – exported – transformed – destroyed. “Net supply” is near equivalent to the term “consumption”, but these values should be interpreted as illustrative estimates for current HFC activity, rather than a reflection of the effectiveness of EPA’s regulatory programs under the AIM Act, which were not effective prior to FY 2022. The estimate for FY 2021 includes a significant increase in imports as entities likely stockpiled HFCs in advance of AIM Act restrictions (additional information provided in the FY 2023, Q2 narrative section). For more information, see: <https://www.epa.gov/climate-hfcs-reduction>.

³ Consumption, with respect to a regulated substance, means production plus imports minus exports.

⁴ Reflects data reported through September 27, 2023. All reported data are certified by the reporter to be true, accurate and complete. EPA continues to review and verify these data and may revise and update these data, as appropriate. EPA considers it likely that these numbers will change as companies and EPA continue to review and verify the data.

Key Milestones

Strategy 1 – Phasing down HFC production and consumption by issuing regulations that set the HFC production and consumption baselines, establish methodologies for allocating and trading HFC allowances, and issue HFC allowances to companies that produced and/or imported HFCs.

- The AIM Act directs EPA to phase down production and consumption of HFCs by 85% below baseline levels by 2036 through an allowance allocation and trading program.
- EPA has established U.S. production and consumption baselines using the formula in the AIM Act that considers past HFC, hydrochlorofluorocarbon (HCFC), and chlorofluorocarbon (CFC) amounts.
- By October 1 of each year, EPA must issue production and consumption allowances for the following calendar year, relative to those baselines.
- EPA will issue regulations, as needed, to implement the phasedown in production and consumption.

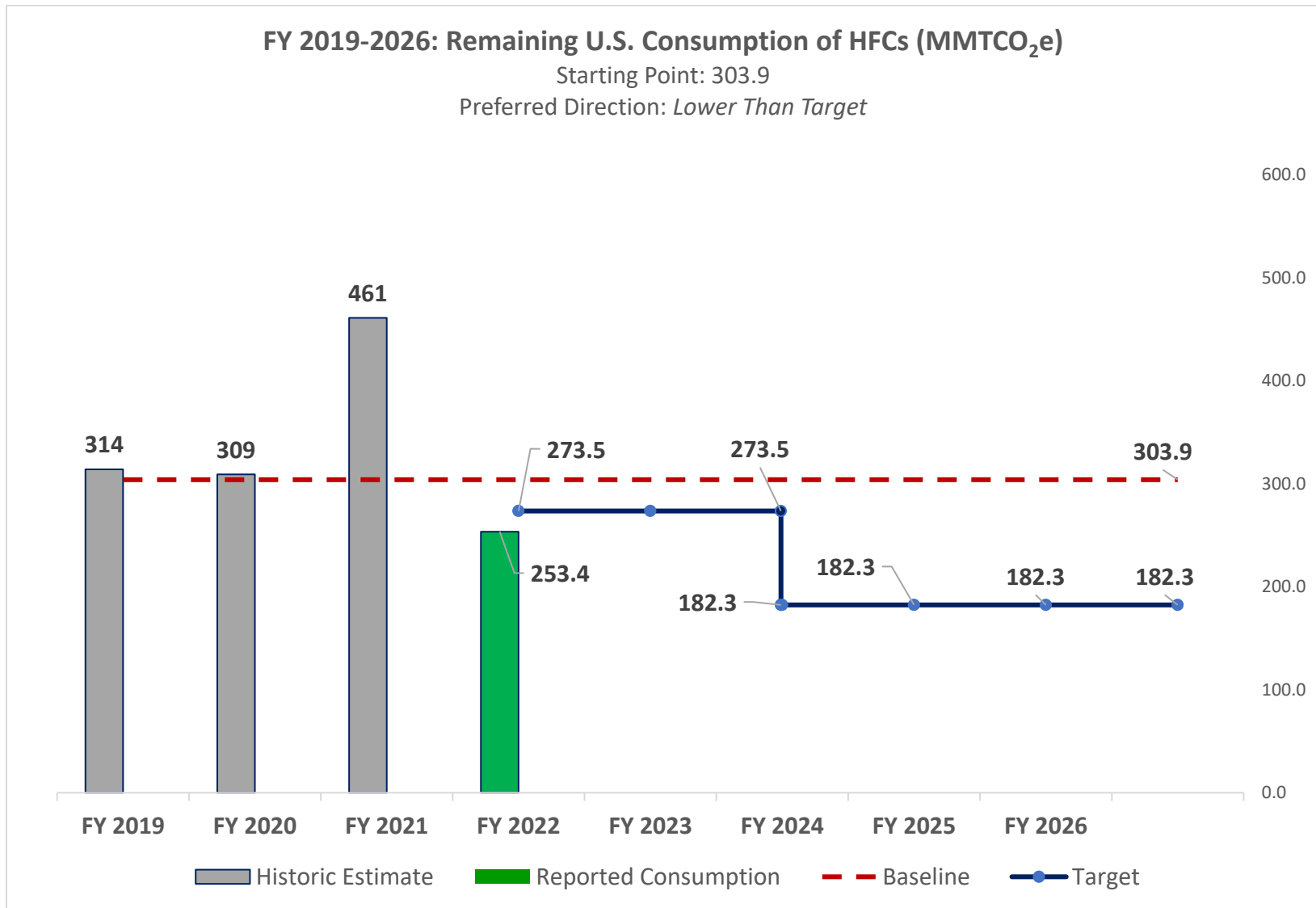
Strategy 2 – Facilitate the transition to next-generation technologies by restricting the use of HFCs in sectors or subsectors.

- The AIM Act provides authority for EPA to promulgate rules restricting (fully, partially, or on a graduated schedule), the use of HFCs in sectors or subsectors where they are used. EPA can either initiate a rulemaking on its own, or a person may petition EPA to promulgate a rule to restrict the use of HFCs in certain sectors or subsectors.
- Once EPA receives a petition, the AIM Act directs the Agency to make the petition publicly available within 30 days of receipt and grant or deny the petition within 180 days of receipt. The AIM Act directs EPA to promulgate a final rule no later than two years after the date the petition was granted. Since 2021, EPA has received a number of petitions that were then granted or partially granted.
- In FY 2023 Q1, EPA intends to propose a regulation to implement this provision of the AIM Act that will, among other things, address all petitions granted thus far and create a framework under subpart (i) of the AIM Act.

Strategy 3 – Facilitate the management of HFCs and their substitutes.

- The AIM Act directs EPA to establish requirements for the management of HFCs and HFC substitutes in equipment. Regulations would 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). Regulations should maximize reclaiming and minimize the release of a regulated substance from equipment.
- EPA will initiate rulemakings to implement this section of the AIM Act.

Key Milestones



Key Milestones



Strategy 1 – Phasing down HFC production and consumption by issuing regulations that set the HFC production and consumption baselines, establish methodologies for allocating and trading HFC allowances, and issue HFC allowances to companies that produced and/or imported HFCs.					
Key Milestone	Milestone Due Date	Milestone Status	Change from Last Quarter	Owner	Comments
Issue Notice allocating 2022 HFC allowances	Q1 FY 2022	Complete	N/A	Cynthia Newberg	
Implement an HFC allowance tracking system to better ensure compliance with the phasedown regulations	Q1 and Q2 FY 2022	Complete	N/A	Cynthia Newberg	
Issue Notice allocating 2023 HFC allowances	Q4 FY 2022	Complete	N/A	Cynthia Newberg	EPA issued 2023 calendar year allowances on September 30, 2022.
Propose regulations to update the Allowance Allocation for 2024 and later years	Q1 FY 2023	Complete	N/A	Cynthia Newberg	Notice of Proposed Rulemaking (NPRM) was published on November 3, 2022.
Launch new database functionality to allow for real time checks of HFC imports in collaboration with U.S. Customs and Border Protection	Q2 FY 2023	Delayed (Started)	N/A	Cynthia Newberg	EPA and U.S. Customs and Border Protection revised the schedule and now plan to launch in Q2, FY 2024.
Issue final rule updating the Allowance Allocation for 2024 and Beyond	Q4 FY 2023	Complete	N/A Changed from “On Track” to “Complete”	Cynthia Newberg	EPA signed a final rule, “Phasedown of Hydrofluorocarbons: Allowance Allocation methodology for 2024 and Later Years,” in June 2023.
Issue Notice allocating 2024 HFC allowances	Q4 FY 2023	On Track	N/A	Cynthia Newberg	EPA issued allowances on September 29, 2023, and notified the public and regulated entities.

Key Milestones

Strategy 2 – Facilitate the transition to next-generation technologies by restricting the use of HFCs in sector or subsectors.					
Key Milestone	Milestone Due Date	Milestone Status	Change from Last Quarter	Owner	Comments
Grant and/or deny first five petitions (no later than 180 days from receipt, i.e., October 10) for sector-based restrictions on HFCs	Q1 FY 2022	Complete	N/A	Cynthia Newberg	
Grant and/or deny another six petitions (no later than 180 days from receipt) for sector-based restrictions on HFCs	Q1 FY 2022	Complete	N/A	Cynthia Newberg	
Review additional petitions for sector-based restrictions on HFCs due in Q1/Q2 FY 2022	Q3 FY 2022	Complete	N/A	Cynthia Newberg	EPA received additional petitions under subsection (i) of the AIM Act. The petitions requested restrictions on the use of HFCs in the same sectors and subsectors covered by petitions previously granted.
Propose regulations on transition to next-generation technologies	Q1 FY 2023	Complete	N/A	Cynthia Newberg	NPRM was published on December 15, 2022.
Review additional petitions for sector-based restrictions on HFCs due in Q3/Q4 FY 2022	Q1 FY 2023	Complete	N/A	Cynthia Newberg	Two petitions granted and are considered in the NPRM published on December 15, 2022.
Review additional petitions for sector-based restrictions on HFCs due in Q1/Q2 FY 2023	Q3 FY 2023	Complete	N/A	Cynthia Newberg	EPA received two petitions, and both were denied.

**EPA receives and then reviews petitions to promulgate rules to restrict the use of HFCs in certain sectors or subsectors. The results of the Agency’s review of these petitions may result in rulemakings. The Agency works to review these petitions within the deadlines set by the AIM Act. Certain petitions may remain under review beyond these deadlines while the Agency works with the petitioner to gather additional data and/or resolve other issues before making a decision. For more information on the technology transition petitions under the AIM Act, please see here: <https://www.epa.gov/climate-hfcs-reduction/technology-transition-petitions-under-aim-act>.*

Key Milestones

Strategy 3 – Facilitate the management of HFCs and their substitutes.					
Key Milestone	Milestone Due Date	Milestone Status	Change from Last Quarter	Owner	Comments
Propose regulations to control, any practice, process, or activity regarding the servicing, repair, disposal, or installation of equipment, maximizing reclamation and minimizing releases of HFCs and their substitutes	Q4 FY 2023	Delayed (Complete)	Changed from “On Track” to “Delayed (Complete)”	Cynthia Newberg	EPA developed and prepared a proposed rule by the end of FY 2023, Q4, but the Administrator's signature was delayed, occurring on October 5, 2023 (i.e., FY 2024, Q1). Interagency review exceeded the standard review timeline by about a month.

Narrative – FY22 Q1

Summary of progress

EPA met its milestones for FY 2022, Q1 and is on track to achieve the FY 2023 target.

Accomplishments:

- Issued final rule by the statutory 270-day deadline establishing allowance allocation and trading program under the AIM Act. This rule sets the HFC production and consumption baseline levels from which reductions will be made, establishes an initial methodology for allocating and trading HFC allowances for 2022 and 2023, and creates a robust, agile, and innovative compliance and enforcement system.
- By October 1, 2021, as directed by the AIM Act, issued calendar year 2022 allowances for the production and consumption of HFCs. Allowances were issued to companies that produced and/or imported HFCs in 2020, based on the three highest non-consecutive years of production or import between 2011–2019. EPA also issued “application-specific allowances” directly to the entities, including the U.S. Department of Defense, that operate within the six applications listed in the AIM Act. These entities will be able to confer their allowances to producers or importers to acquire needed HFCs.
- Granted in full ten petitions and partially granted one petition submitted under subsection (i) of the AIM Act. Subsection (i) of the AIM Act facilitates the transition to next-generation technologies through sector-based restrictions. These petitions request that EPA restrict the use of HFCs in refrigeration and air conditioning, aerosols, and foams sectors.
- HFC Allocation Rule reporting functionality launched starting in December 2021 using EPA and U.S. Customs and Border Protection (CBP) systems, with webinars and supporting outreach for stakeholders. EPA initiated near real time reviews of HFC imports using CBP’s trade data system. EPA/CBP HFC Task Force began targeting HFC imports for potential illegal imports. Training provided to CBP Officers. OAR began referring likely violations to OECA for enforcement action.

Challenges:

- The AIM Act dictates a rigorous schedule for actions to be taken including promulgating final rules.
- EPA is expanding its existing IT system for managing ODS reporting and tracking to create new modules to implement HFC reporting and tracking under the allowance allocation and trading program. Three modules will be developed to perform the following activities: reporting on production and consumption of HFCs, including allowance tracking (FY22); real time tracking of import data reported to CBP and EPA to prevent and detect illegal imports of HFCs (FY22 and FY23); and tracking the movement of HFCs through commerce to ensure HFCs being purchased and sold in the U.S. are from legal production, import and recycling/reclamation (FY22 through FY24). Development of the IT systems will be complex, and its successful implementation is critical to ensuring the integrity of the program.

Narrative – FY22 Q2

Summary of progress

EPA met its milestones for FY 2022, Q2 and is on track to achieve the FY 2023 target.

Accomplishments:

- On March 14, 2022, held the inaugural meeting of the Interagency Task Force on Illegal HFC Trade. As of January 1, 2022, when the EPA HFC Allowance Allocation and Trading program went into effect, the import of HFCs requires allowances. Shipments coming to U.S. ports without proper allowances have been identified, stopped, and re-exported. The task force helps ensure the vast environmental benefits of the rule are realized by detecting, deterring, and disrupting any attempts to illegally import HFCs into the United States. The task force has prevented illegal HFC shipments equivalent to approximately 530,000 metric tons of CO₂ emissions, the same amount as the emissions from nearly 100,000 homes' electricity use in one year.
- Violating the AIM Act can result in administrative and civil fines as well as injunctive relief and other consequences including the revocation of allowances. In addition, illegally imported HFCs may be seized by authorities, or the importer required to re-export or destroy the goods, at their cost. Knowing violations of the AIM Act and related smuggling crimes may result in criminal fines, imprisonment, and other penalties as appropriate.
- The task force is co-chaired by EPA and the Department of Homeland Security, and includes Customs and Border Protection, Department of Defense, Department of Justice, and Department of State. In addition to stopping illegal imports at the border, the task force also announced that EPA has issued 14 Notices of Violation to companies that have allegedly failed to comply with HFC reporting obligations under the Greenhouse Gas Reporting Program (GHGRP). These companies are HFC importers who received HFC allowances after reporting late. Enforcement of the GHGRP is a necessary component of upholding the HFC Allowance Allocation and Trading Program and the task force's deterrence work. The GHGRP is also an important part of EPA's broader climate regulatory and enforcement work.
- On March 24 and 30, 2022, EPA hosted stakeholder meetings with over 350 participants virtually attending each meeting. The meetings were to share information and provide an opportunity for public input on two upcoming rulemakings. The HFC Allowance Allocation and Trading Program rule will establish the allowance allocation methodology for 2024 and later years and potentially propose updates to certain reporting requirements. A second rule will address the 10 petitions that EPA has granted and one petition that it has partially granted under its AIM Act

Narrative – FY22 Q2

authority to promulgate rules restricting (fully, partially, or on a graduated schedule), the use of HFCs in sectors or subsectors.

- On March 31, 2022, EPA issued HFC allowances from the set-aside pool for application-specific entities with unique circumstances and new market entrants. The pool was established in EPA's 2021 final rule, *Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program*, under the AIM Act (for more information, see <https://www.regulations.gov/document/EPA-HQ-OAR-2021-0669-0002>).
- EPA completed the planned milestone to implement an HFC allowance tracking system to better ensure compliance with the phasedown regulations.

Challenges:

- The AIM Act dictates a rigorous schedule for actions to be taken including promulgating final rules with multiple rules being developed at the same time.
- EPA is expanding its existing IT system for managing ODS reporting and tracking to create new modules to implement HFC reporting and tracking under the allowance allocation and trading program. Three modules will be developed to perform the following activities: (1) reporting on production and consumption of HFCs, including allowance tracking (FY 2022); (2) real time tracking of import data reported to Customs and Border Protection and EPA to prevent and detect illegal imports of HFCs (FY 2022 and FY 2023); and (3) tracking the movement of HFCs through commerce to ensure HFCs being purchased and sold in the U.S. are from legal production, import and recycling/reclamation (FY 2022 through FY 2024). Development of these IT system enhancements will be complex, and its successful implementation is critical to ensuring the integrity of the program.

Narrative – FY22 Q3

Summary of progress

EPA met its milestone for FY 2022, Q3 and is on track to achieve the FY 2023 target.

Accomplishments:

- EPA received additional petitions under subsection (i) of the AIM Act and is currently reviewing them. The petitions requested restrictions on the use of HFCs in the same sectors and subsectors covered by petitions previously granted. The additional petitions resulted in EPA missing the milestone to grant and/or deny additional petitions.
- After convening the first meeting of the Interagency Task Force on Illegal HFC Trade, U.S. Customs and Border Protection worked with EPA to ensure all U.S. ports are covered by the Trade Special Operation (TSO) launched in January 2022.
- On June 30, 2022, EPA hosted two sector-specific workshops with stakeholders from the stationary refrigeration and air conditioning sectors as well as aerosols, foams, motor vehicle air conditioning, and other sectors. The workshops provided an opportunity to receive further input from stakeholders on topics to be considered in an upcoming proposed rule under subsection (i) of the AIM Act. Subsection (i) of the AIM Act facilitates the transition to next-generation technologies through sector-based restrictions. About 200 participants virtually attended each workshop.
- EPA is on track to send the proposed rule to update the Allowance Allocation for 2024 and later years to OMB in July 2022 to initiate interagency review.
- EPA is on track to send the proposed rule under subsection (i) of the AIM Act to establish requirements to transition to next-generation technologies to OMB in FY 2022, Q4 to initiate interagency review.

Challenges:

- The AIM Act dictates a rigorous schedule for actions to be taken including promulgating final rules.

Narrative – FY22 Q4

Summary of progress

EPA met its milestones for FY 2022, Q4 and is on track to achieve the FY 2023 target.

Accomplishments:

- Retired more than 2.6 MMTCO_{2e} worth of HFC consumption allowances using administrative consequences provisions in the HFC Allocation Framework rule.
- Managed the day-to-day work of the Interagency Task Force on Illegal HFC Trade which continues to monitor U.S. borders for potentially illegal HFC shipments.
- Hosted a webinar on July 13, 2022, for application-specific allowance holders to explain and answer questions on the process for reporting information as part of their HFC Application-Specific Allowance Holder biannual report, and on how calendar year 2023 application-specific allowances will be determined. The first biannual report for application-specific allowance holders was due on July 31, 2022.
- Developed and sent to OMB on July 20, 2022, the proposed rule to update the Allowance Allocation for 2024 and later years to initiate interagency review.
- Developed and sent to OMB on August 29, 2022, the proposed rule to restrict the use of HFCs which addresses the petitions as well as establishes the framework for this new HFC program under subsection (i) of the AIM Act.
- In September 2022, granted two petitions and clarified that two other petitions were addenda to previously granted petitions, thus not requiring separate decisions.
- On September 30, 2022, issued calendar year 2023 allowances for the production and consumption of HFCs. The AIM Act directs EPA by October 1 of each calendar year, to determine the quantity of production and consumption allowances for the subsequent calendar year.
- In September 2022, provided notice to certain companies that the Agency intends to retire an identified set of those companies' allowances in accordance with the administrative consequences provisions established in the final rule.

Challenges:

- The AIM Act dictates a rigorous schedule for actions to be taken including promulgating final rules while simultaneously implementing those rules.

Narrative – FY23 Q1

Summary of progress

EPA met its milestones for FY 2023, Q1 and is on track to achieve the FY 2023 target.

Accomplishments:

- On October 17, 2022, published a Notice of Data Availability (NODA) to alert stakeholders of information from EPA regarding the United States' HFC reclamation activity presented in a draft report, "Analysis of the U.S. Hydrofluorocarbon Reclamation Market: Stakeholders, Drivers, and Practices." In addition, the NODA provided notice of a virtual stakeholder meeting which was subsequently held on November 9, 2022, and attended by nearly 300 participants.
- On November 3, 2022, published a proposed rule to establish the allocation methodology for the "general pool" of HFC production and consumption allowances for 2024 through 2028. The proposed rule would also amend the consumption baseline to reflect updated data and make other adjustments based on lessons learned from implementation of the HFC phasedown program to date.
- On November 29, 2022, held the second meeting of the Interagency Task Force on Illegal HFC Trade. Shipments of HFCs coming to U.S. ports without proper allowances have been identified, stopped, and re-exported. The Task Force helps ensure the vast environmental benefits of the HFC phasedown are realized by detecting, deterring, and disrupting any attempts to illegally import HFCs into the United States. In FY 2022, the Task Force prevented illegal HFC shipments equivalent to more than 889,000 MMTCO_{2e}; the same amount as the emissions from nearly 173,000 homes' electricity use for one year. The Task Force will continue to cooperate on and improve real-time monitoring of our borders to prevent illegal HFC trade, with increased opportunities for training U.S. customs officers, especially leading up to the 2024 reduction in HFCs to 40% below historic baseline levels.
- On December 15, 2022, published a proposed rule under subsection (i) of the AIM Act that would restrict the use of certain higher-GWP HFCs in aerosols, foams, refrigeration, air conditioning, and heat pump products and equipment.
- On December 15, 2022, EPA presented a webinar for nearly 400 participants to provide information about the HFC import requirements and steps customs brokers must take to file a successful entry.
- On December 30, 2022, EPA held a virtual hearing on the proposed rule under subsection (i) of the AIM Act to restrict use of certain HFCs in specific sectors and was attended by over 200 participants.
- EPA is conducting active and ongoing oversight of the AIM allocation and reporting program to ensure parties are reporting their import and production of HFCs accurately, and to ensure that EPA is making appropriate decisions regarding HFC allocation volumes for importers and producers each year. EPA found that several entities misreported historic data. As a consequence, EPA is retiring allowances for each of the affected entities for calendar year 2023. Altogether, EPA retired more than 3.8 MMTCO_{2e} of 2023 allowances as a result of misreporting and importing without

Narrative – FY23 Q1

allowances. For calendar year 2022, EPA retired more than 2.6 MMTCO_{2e} of allowances. Once retired, these allowances cannot be used, providing additional environmental benefit.

Challenges:

- The AIM Act dictates a rigorous schedule for actions to be taken, including promulgating rules to facilitate the transition to next-generation technologies and the management of HFCs, while simultaneously implementing and revising existing rules to phase down HFC production and consumption.
- EPA is preparing for two challenges to issue calendar year 2024 allowances by October 1, 2023:
 - 1) Meeting the required timely finalization of the proposed rule “Allowance Allocation Methodology for 2024 and Beyond,” which updates the methodology for allocating HFC allowances and without which EPA will not be able to issue allowances for next year. To address, EPA is seeking expedited review of the final rule to ensure its timely completion; and
 - 2) Efficient review of application-specific allowance applications, which are due July 31, 2023. To address, EPA intends to conduct additional outreach to stakeholders to ensure applicants know how to submit a timely and complete application-specific allowance request with sufficient documentation.
- EPA is responding to several legal challenges on aspects of the HFC Allowance Allocation regulations. While these challenges have not impeded EPA's ability to meet the aggressive AIM Act timelines, they require resources to effectively defend AIM Act programs.

Narrative – FY23 Q2

Summary of progress

EPA is on track to achieve the FY 2023 target.

Accomplishments:

- EPA reported estimated HFC consumption for FY 2021. The estimate is based on data reported to the Greenhouse Gas Reporting Program and serves as a reasonable but incomplete proxy to consumption. This value should be interpreted as an illustrative estimate for current HFC activity, rather than a reflection of the effectiveness of EPA's regulatory programs under the AIM Act, which were not effective prior to FY 2022. The estimate for FY 2021 includes a significant increase in imports as entities likely stockpiled HFCs in advance of AIM Act restrictions. Based on prior experience phasing out ozone-depleting substances, EPA anticipated an increase in FY 2021 in advance of the first consumption limit starting January 1, 2022. EPA fully expects to be able to meet the HFC phasedown milestones through effective implementation of regulations under the AIM Act, including actions by the Interagency Task Force on Illegal HFC Trade to detect, deter, and disrupt any attempt to illegally import or produce HFCs in the United States.
- On March 16, 2023, EPA hosted an AIM Act stakeholder meeting targeted at those involved in reclamation of HFCs. Information regarding the upcoming rulemaking on Management of HFCs and their substitutes under the AIM Act was shared and stakeholder input was received.
- EPA took final action on two petitions under AIM Subsection (i) within the statutory deadline of 180 days from receipt of these petitions.⁵
- EPA is on track to send the final rule to update the Allowance Allocation program for 2024 and later years to OMB in Q3 of FY 2023 to initiate interagency review.
- EPA is on track to send the final rule under subsection (i) of the AIM Act to establish requirements to transition to next-generation technologies to OMB in FY 2023, Q3 to initiate interagency review.
- EPA managed the day-to-day work of the Interagency Task Force on Illegal HFC Trade which continues to monitor U.S. borders for potentially illegal HFC shipments.
- EPA initiated additional outreach to entities that have or could qualify for application-specific allowances to ensure applicants know how to submit a timely and complete application-specific allowance request with sufficient documentation.

⁵ The Agency announced its decision on these topics on March 22, 2023. [Notices of Determination for Petitions Submitted under Subsection \(i\) of the American Innovation and Manufacturing Act of 2020 | US EPA](#)

Narrative – FY23 Q2

Challenges:

- The AIM Act dictates a rigorous schedule for actions to be taken, including promulgating rules to facilitate the transition to next-generation technologies and the management of HFCs, while simultaneously implementing and revising existing rules to phase down HFC production and consumption.
- EPA is preparing for two challenges to issue calendar year 2024 allowances by October 1, 2023:
 - 1) Meeting the required timely finalization of the proposed rule “Allowance Allocation Methodology for 2024 and Beyond,” which updates the methodology for allocating HFC allowances and without which EPA will not be able to issue allowances for next year. To address, EPA secured an agreement for expedited review of the final rule to ensure its timely completion; and
 - 2) Efficient review of application-specific allowance applications, which are due July 31, 2023. To address, EPA will continue to conduct additional outreach to stakeholders to ensure applicants know how to submit a timely and complete application-specific allowance request with sufficient documentation.
- EPA is responding to several legal challenges on aspects of the HFC Allowance Allocation regulations. While these challenges have not impeded EPA's ability to meet the aggressive AIM Act timelines, they require resources to effectively defend AIM Act programs.

Narrative – FY23 Q3

Summary of progress

EPA is on track to achieve the FY 2023 target.

Accomplishments:

- In conjunction with the Semiconductor Industry Association (SIA), EPA hosted a webinar on the HFC Allowance Allocation Program for the semiconductor industry (June 15, 2023).
- EPA signed two final rules under Allowance Allocation program. The final rule, “Allowance Allocation Methodology for 2024 and Later Years” establishes the methodology for allocating HFC production and consumption allowances starting with calendar year 2024 allowances and adjusted the consumption baseline to reflect corrected data (June 30, 2023). The final rule, “Adjustment to the Hydrofluorocarbon Baseline,” amended the production baseline and associated phasedown schedule to reflect corrected data (June 29, 2023).
- EPA sent the final rule under subsection (i) of the AIM Act to establish requirements to transition to next-generation technologies to OMB to initiate interagency review (June 29, 2023).
- EPA sent the proposed rule under subsection (h) to facilitate the management of HFCs and their substitutes to OMB to initiate interagency review (June 1, 2023).

Challenges

- The AIM Act dictates a rigorous schedule for actions to be taken, including promulgating rules to facilitate the transition to next-generation technologies and the management of HFCs, while simultaneously implementing and revising existing rules to phase down HFC production and consumption.
- EPA has made progress addressing a potential challenge to issuing calendar year 2024 allowances by October 1, 2023:
 - Efficient review of application-specific allowance applications, which are due July 31, 2023. To address, EPA has and will continue to conduct additional outreach to stakeholders to ensure applicants know how to submit a timely and complete application-specific allowance request with sufficient documentation. EPA has held three webinars for application-specific allowance holders to provide a refresher on the process and answer questions, in addition to individual consultations, as requested. Further, EPA has established an aggressive timeline for review and decision-making on each application to ensure allowances are issued on-time.
- EPA is responding to legal challenges related to the HFC Allowance Allocation regulations. While these challenges have not impeded EPA's ability to meet the aggressive AIM Act timelines to date, they require resources to effectively defend AIM Act programs. Relatedly, on June 20, 2023, the United States Court of Appeals for the District of Columbia Circuit vacated the QR-code and refillable-cylinder parts of EPA's 2021 Allocation Framework Rule. EPA is reviewing the decision and its implications.

Narrative – FY23 Q3

- Work to launch new database functionality to allow for enhanced real time checks of HFC imports in collaboration with CBP is delayed. While an interagency agreement (IA) has been funded, the work has not been initiated. Extended delays were attributed to a transition change with the IT system to allow for the allocation of IA funds and CBP's internal approval process to implement the funding and initiate work.

Narrative – FY23 Q4

Summary of progress

EPA completed three planned Q4 milestones, with one milestone that was completed a few days after the quarter to account for the Administrator’s signature on a proposed rule and continued making progress toward the FY 2023 target.

Accomplishments:

- On August 10th, EPA co-hosted the third meeting of the Interagency Task Force on Illegal Trade to support the effective enforcement of HFC import requirements under the AIM Act. The primary focus for the meeting was preparing for the significant stepdown in allowable HFC consumption to 60% of historic baseline levels in calendar year 2024.
- On September 29th, EPA issued HFC production, consumption, and application-specific allowances for calendar year 2024 and notified stakeholders, including by releasing a signed *Federal Register* notice. In total, for calendar year 2024, EPA issued 229,521,263 MTCO₂e of HFC allowances for production and 181,522,990 MTCO₂e of HFC allowances for consumption.
- Also on September 29th, EPA provided notice of separate Agency actions finalizing administrative consequences for certain entities. These administrative consequences were applied to withhold, retire, and revoke entities’ allowances in 2023, 2024, and later years in accordance with the administrative consequence regulatory provisions. EPA also redistributed revoked allowances to entities that did not have an administrative consequence that became effective on September 29, 2023. The administrative consequences finalized in the quarter totaled more than 6.3 MMTCO₂e of consumption allowances and will be spread out over multiple years.

Challenges:

- The AIM Act dictates a rigorous schedule for actions to be taken, including promulgating rules to facilitate the transition to next-generation technologies and the management of HFCs, while simultaneously implementing and revising existing rules to phase down HFC production and consumption.
- EPA addressed potential challenges to issuing calendar year 2024 allowances by October 1, 2023, including efficient review of application-specific allowance applications.
- Work to launch new database functionality to allow for enhanced real time checks of HFC imports in collaboration with CBP was delayed. EPA and CBP revised the schedule and now plan to launch in Q2 FY 2024. Extended delays were attributed to a transition change with the IT system to allow for the allocation of IA funds and CBP’s internal approval process to implement the funding and initiate work.

FY 2022-2023 APG Summary

EPA completed 13 of 14 milestones for FY 2022-2023 with one milestone continuing into FY 2024-2025 APG implementation; and made significant progress towards the FY 2023 target to decrease the U.S. HFC consumption limit to less than 273.5 MMTCO_{2e} in 2023 with the latest data (FY 2022) showing the consumption limit at 253.4 MMTCO_{2e}⁶. Highlights include:

- Began implementing the first final rule under the American Innovation and Manufacturing (AIM) Act to phase down U.S. production and consumption of hydrofluorocarbons (HFCs) 85% by 2036, which is estimated to cumulatively reduce GHG emissions by 4,600 MMTCO_{2e} between 2022 and 2050.
- Continued implementation of the AIM Act by managing the HFC allowance allocation program in 2022 and 2023 and preparing for the HFC phasedown in 2024 and beyond by publishing final rules to amend the production and consumption baselines and methodology to issue allowances for 2024 through 2028.
- Issued HFC production and consumption allowances for calendar year 2022 and 2023; and retired calendar year 2022 and 2023 consumption allowances using administrative consequences provisions in HFC Allocation Framework rule.
- Launched and co-chaired the Interagency Task Force on Illegal HFC Trade with the Department of Homeland Security.
- EPA reviewed petitions under AIM Subsection (i) within the statutory deadline of 180 days from receipt.
- The AIM Act dictates a rigorous schedule for actions to be taken, including promulgating rules to facilitate the transition to next-generation technologies and the management of HFCs, while simultaneously implementing and revising existing rules to phase down HFC production and consumption.

⁶ Reflects data reported through September 27, 2023. All reported data are certified by the reporter to be true, accurate and complete. EPA continues to review and verify these data and may revise and update these data, as appropriate. EPA considers it likely that these numbers will change as companies and EPA continue to review and verify the data.

Data Accuracy & Reliability

Measurement and Baseline

- EPA established and updated U.S. production and consumption baselines using a formula provided by the AIM Act that considers past HFC, HCFC, and CFC amounts.
- The production baseline is calculated by adding: (i) the average annual quantity of all regulated substances produced in the U.S., from January 1, 2011, through December 31, 2013, and (ii) 15% of the production level of HCFCs in calendar year (CY) 1989, and (iii) 0.42% of the production level of CFCs in CY 1989.
- Similarly, the consumption baseline is calculated by adding: (i) the average annual quantity of all regulated substances consumed in the U.S. from January 1, 2011, through December 31, 2013, and (ii) 15% of the consumption level of HCFCs in CY 1989, and (iii) 0.42% of the consumption level of CFCs in CY 1989.

Data Sources⁷

- EPA will leverage two existing reporting systems to collect and track data on HFCs: (1) Electronic Greenhouse Gas Reporting Tool (e-GGRT); and (2) ozone-depleting substance tracking system (ODSTS). EPA currently uses e-GGRT to collect and store data on GHGs (including HFCs) in accordance with the GHGRP (40 CFR part 98) and ODSTS to collect and track data on ODS that are reported in accordance with 40 CFR part 82. Both systems are designed to collect and store CBI in compliance with U.S. government security standards.
- Additionally, EPA is requiring submission of a limited amount of data through CBP's Automated Commercial Environment (ACE) to support real-time review of imports prior to importation. Collecting these data through ACE will require modifications to EPA and likely CBP data management systems to allow for more streamlined review and sharing of information.

Methodology

- Data are aggregated across all U.S. companies for each individual HFC to analyze U.S. total calculated consumption and production.

⁷ EPA removed reference in this document to a tracking system to allow for the generation and tracking of QR codes and certification IDs for containers of regulated HFCs to meet requirements in the final rule, "Phasedown of Hydrofluorocarbons: Establishing the Allowance Allocation and Trading Program Under the American Innovation and Manufacturing Act" (86 FR 5516), published in October 2021. These container tracking provisions were vacated by the United States Court of Appeals for the District of Columbia Circuit on June 20, 2023.

Additional Information

Organizations

- Environmental Protection Agency (EPA)
 - Office of Air and Radiation (OAR)
 - Office of Atmospheric Protection (OAP)
 - Stratospheric Protection Division (SPD)
 - Phasedown Implementation Branch
 - Technology Transition Branch
 - Emissions Reduction Branch
 - Data and Analysis and Systems Branch
 - Climate Change Division (CCD)
 - Office of Enforcement and Compliance (OECA)
 - Office of General Council (OGC)
 - Office of Mission Support (OMS)
- Department of Homeland Security (DHS)
 - Customs and Border Protection (CBP)

Program Activities

- Phasing down production and consumption through an allowance allocation and trading program.
- Facilitating the transition to next-generation technologies through sector-based restrictions.
- Facilitating the management of HFCs and their substitutes to maximize reclaiming and minimize releases of HFCs.

Regulations

- EPA regulations addressing HFC production and consumption under the AIM Act.
- EPA regulations to reduce and control ODS supporting the phasedown of HFCs, including regulations under Section 612 of the Clean Air Act (CAA) and EPA's Significant New Alternatives Policy (SNAP) program that reviews ODS substitutes within a comparative risk framework.

Policies

- EPA policies related to AIM Act implementation (e.g., procedures for responding to petitions submitted under Subsection (i) of the AIM Act, etc.)

Additional Information

Other Federal Activities

- Enforcement – EPA is requiring submission of selected data through CBP's ACE to support real-time review of imports prior to importation. EPA is also working with the DHS as part of a Task Force to prevent the illegal import and illegal trade in HFCs.

Stakeholder / Congressional Consultations

- Through the rulemaking process, EPA obtains public comments from stakeholders. EPA also regularly holds stakeholder meetings, presents at industry conferences, and hosts webinars to provide information about the regulatory programs.
- EPA regularly briefs Congress on progress implementing the AIM Act.
- EPA establishes publicly available dockets with information documenting Agency decisions on petitions submitted under subsection (i) of the AIM Act.
- EPA provides information on its website to make stakeholders aware of program activities and requirements, including recent rulemakings, allowance allocations, administrative consequences, and reporting instructions.