



The American Innovation and Manufacturing (AIM) Act

Sector Workshops

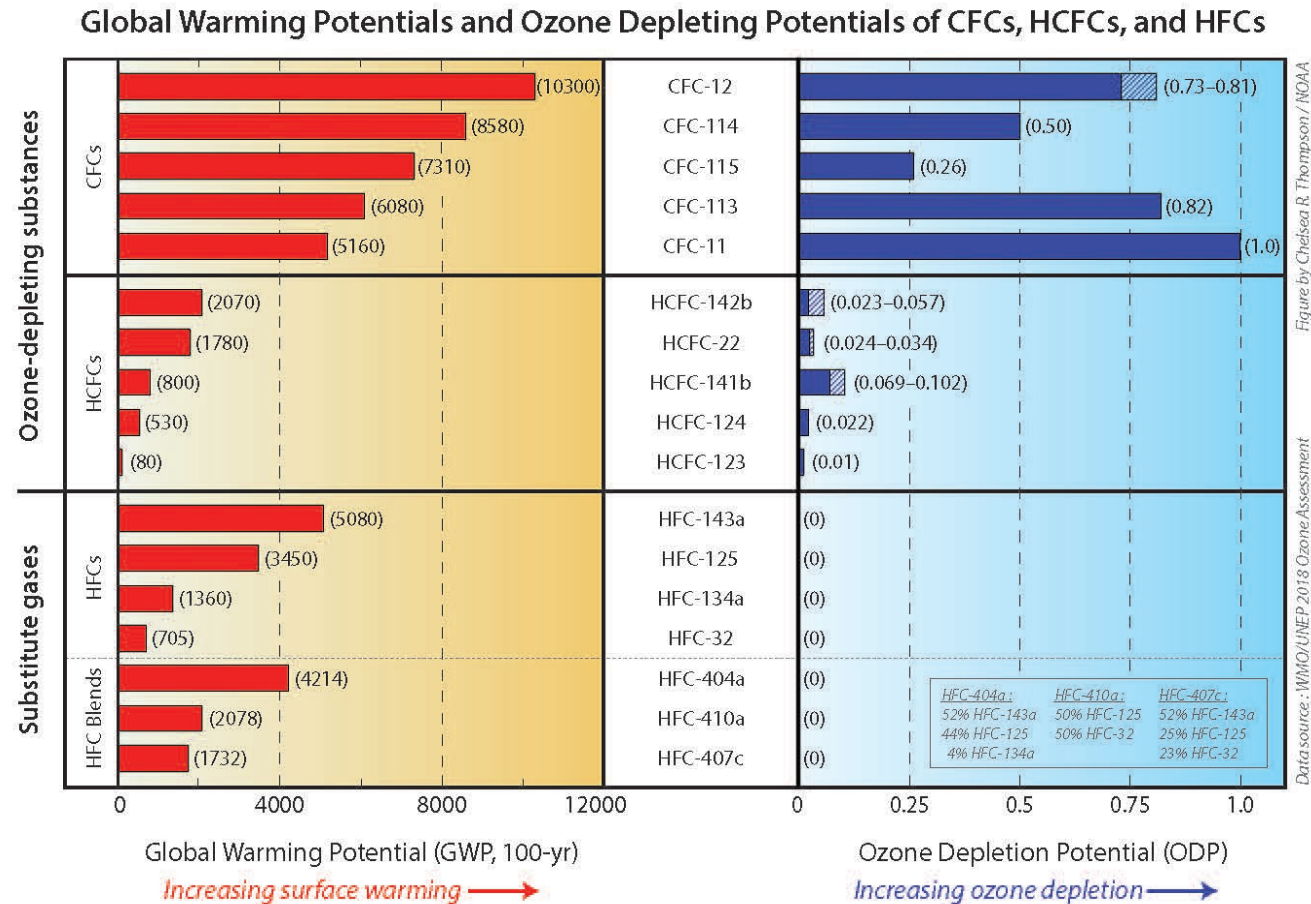
MARCH 11-12, 2021

Agenda

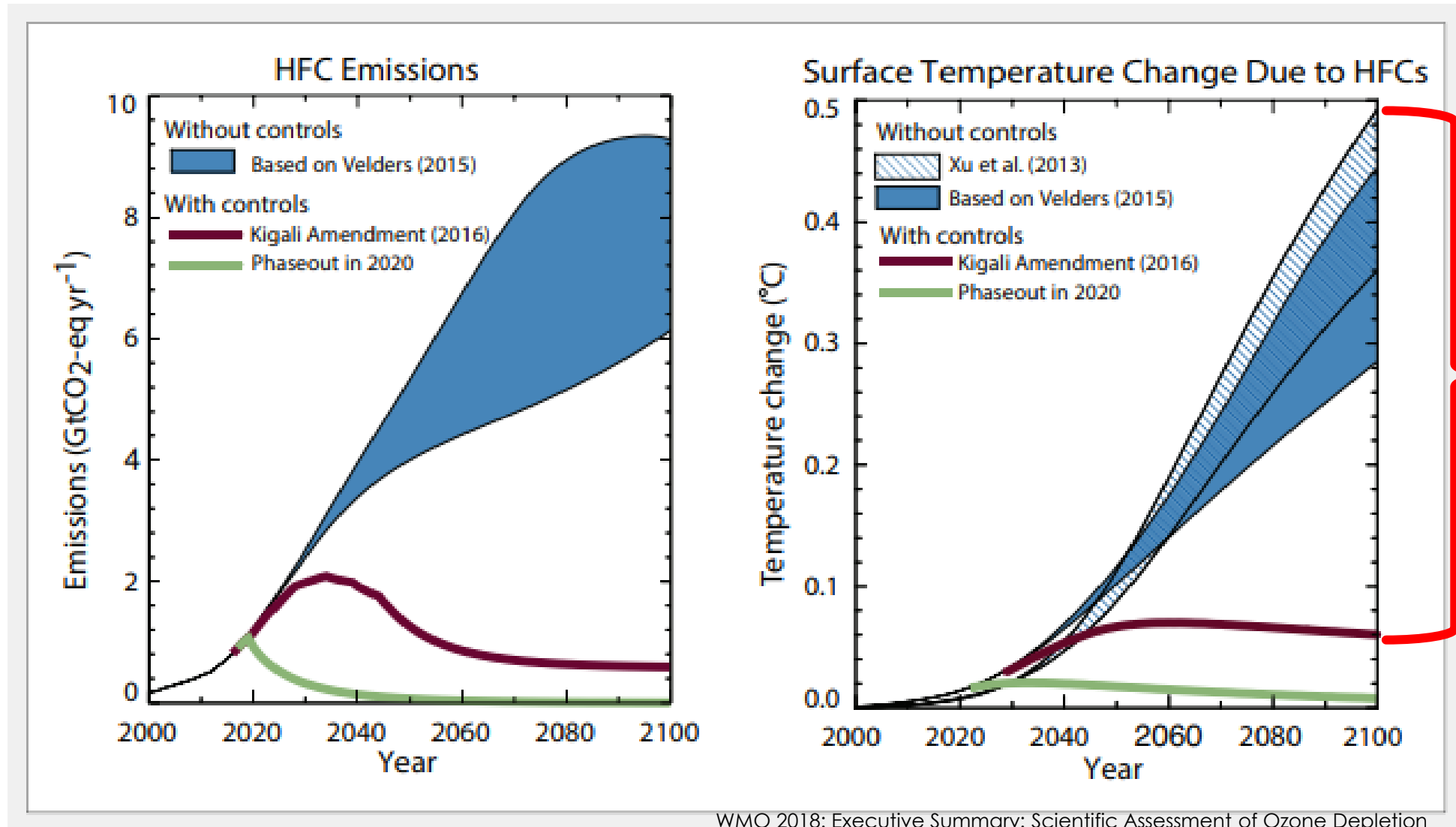
- ▶ Welcome & Introductions
- ▶ The AIM Act and First Actions
- ▶ HFC Application
- ▶ Open Dialogue
- ▶ Closing

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 American Innovation & Manufacturing (AIM) Act

- ▶ 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

HFC Phasedown Schedule

- ▶ Important 2021 statutory deadlines:
 - ▶ 270 days after enactment EPA to issue phasedown regulations = **September 23**
 - ▶ Less than **200** days to go
 - ▶ **By October 1st** allocate allowances for 2022

Date	Caps: Consumption & Production
2022–2023	90 percent
2024–2028	60 percent
2029–2033	30 percent
2034–2035	20 percent
2036 & after	15 percent

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

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 (NODA)

- ▶ NODA published 2/11/21; comment period closed 2/25/21
- ▶ Provided information on HFC production and consumption between 2011 and 2013 as reported to the GHGRP
- ▶ Identified potential data gaps and requested comments on areas of additional information
- ▶ Provided preliminary information on HFCs for some of the specific applications allowed under the AIM Act for allocations
- ▶ Data will inform the establishment of U.S. HFC baselines for production and consumption

First Actions: HFC Phasedown Allocation Rulemaking

- ▶ NPRM allocation rule
- ▶ Fast-tracked, planned signature late April/early May
 - ▶ Planning for a 45-day comment period
- ▶ Rule will stand up allocation program, list entities receiving allowances, and set up methodology for distributing allowances
 - ▶ Amounts of application-specific allocations to be issued
- ▶ EPA will issue a benefits-costs analysis and other technical support documents

Onboard Aerospace Fire Suppression

Background

- ▶ Onboard aerospace fire suppression is the use of a regulated substance in fire suppression equipment used on board commercial aircraft and general aircraft (private and business jets) and space vehicles
- ▶ Fire suppression systems on board commercial aircraft include total flooding systems (engine nacelles, auxiliary power units, lavatory trash receptacles, baggage/crew compartments) and streaming applications (handheld extinguishers)

Background (cont'd)

- ▶ “Space vehicles means a man-made device, either manned or unmanned, designed for operation beyond earth's atmosphere. This definition includes integral equipment such as models, mock-ups, prototypes, molds, jigs, tooling, hardware jackets, and test coupons. Also included is auxiliary equipment associated with test, transport, and storage, which through contamination can compromise the space vehicle performance.” (40 CFR 82.3 and 40 CFR 82.62)
- ▶ Onboard space vehicle fire suppression systems are equipment or systems installed to protect lives and high-value, sensitive assets in the event of a fire

Commercial Aircraft HFC Use

- ▶ Commercial aircraft fire suppression systems installed on passenger and freighter aircraft have historically used halons
- ▶ HFC-236fa and HFC-227ea replaced halon 1301 lavatory trash receptacles systems in new and existing commercial aircraft
- ▶ In 2020, industry estimates that 0.38 metric tons (MT) of HFC-227ea and 0.30 MT of HFC-236fa were installed in new lavatory fire suppression systems on commercial aircraft
- ▶ In 2025, EPA estimates that, absent transition to alternatives, 1.1 MT of HFCs are estimated to be installed in new commercial aircraft lavatory fire suppression systems

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

Questions for Discussions

- ▶ Is the estimated amount of HFCs for onboard commercial aviation fire suppression reasonable? What has been the trend in the past (e.g., last five years)?
- ▶ What are HFC uses for onboard general aviation fire suppression? What are the estimated amounts of HFCs and trends in use?
- ▶ What are the specific HFC uses for onboard space vehicle fire suppression systems?
- ▶ What is the estimated amount of HFCs for onboard space vehicle fire suppression systems? What has been the trend in the past (e.g., last five years)?
- ▶ What alternatives do you see in the future for onboard aerospace fire suppression systems? What challenges remain in finding and implementing alternatives?
- ▶ What relevant data is EPA seeking for this application?
- ▶ How can information be submitted to EPA?

Closing