



Environmental Update

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IASFPWG Meeting
October 30, 2014
Atlantic City, New Jersey

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Overview

- International Dates for Halon Replacement
 - European Union
 - ICAO
- Climate Change
 - Science/International Negotiations
 - HFCs – EPA, Montreal Protocol, EU F-gas Regulation, Japan, Australia Carbon Tax



Halon Replacement Dates

| | Requirement | Lavatory | Handheld | Engine/AP U | Cargo |
|--------------------|---------------------------------|----------|----------|----------------|-------|
| New Design | EC Cutoff Date | 2011 | 2014 | 2014 | 2018 |
| | ICAO New Design | 2014 | 2016 | 2014 | None |
| Current Production | EC End Date (includes retrofit) | 2020 | 2025 | 2040 | 2040 |
| | ICAO New Production | 2011 | 2016 | None | None |

- *EC: European Commission Regulation 744/2010 dates published August 2010 effective December 31 of stated year; information on Montreal Protocol, EC Regulation & alternative agents in "Book 2" incorporated into EASA CS-25 Amendment 12, July 2012.*
- *ICAO: International Civil Aviation Organization halon replacement "resolution" (A37-9) adopted at ICAO General Assembly Meeting on October 6, 2010. Amendments to Annexes 6 & 8 adopted in June 2011. Effective December 31 of stated year.*



Climate Change - Science

- The scientific basis for climate change has not changed, and if anything is growing stronger
- The most recent science assessment (IPCC 5th Assessment Report) concludes:
 - Higher level of confidence that global warming is man-made and starting to affect weather events, such as flooding, drought, heat waves and wildfires
 - “Many of these changes would persist for centuries”
 - “Limiting climate change would require substantial and sustained reductions of CO₂ emissions.”



Climate Change - Science

- US National Climate Assessment
 - “The cumulative weight of the scientific evidence...confirms that climate change is affecting the American people now, and will affect our future and that of future generations.”
 - “Multiple lines of independent evidence confirm that human activities are the primary cause of the global warming of the past 50 years.”

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Climate Policy - International

- Negotiations are continuing under the Durban Platform, which calls for a new climate change treaty to be signed by 2015 and begin by 2020
- Final treaty to be agreed and signed at COP 21 in Paris November 30 – December 11, 2015
- Developed countries focused on mitigation (reducing emissions) with nationally defined contributions applicable to all countries
- Developing countries focused on adaptation assistance and financing



Climate Policy - HFCs

- EPA SNAP Program
 - President's Climate Action Plan directs EPA to use its authority under the SNAP program
 - “to encourage private-sector investment in low-emissions technology by identifying and approving climate-friendly chemicals
 - while prohibiting certain uses of the most harmful chemical alternatives”



Climate Policy - HFCs

- EPA SNAP Program

- EPA proposed rule and notice that list new low-GWP alternatives as acceptable (Powdered Aerosol D in occupied spaces)
- EPA proposed rule published on August 6 that would de-list from SNAP certain high-GWP HFCs in specific end uses: consumer aerosols, foam blowing, commercial refrigeration, and auto air conditioning



Climate Policy - HFCs

- EPA SNAP Program
 - EPA is not proposing to change the SNAP status of any fire protection agents in this initial proposal
 - It should be noted that two of the agents that are being proposed to be delisted for consumer aerosols are HFC-227ea and HFC-125, so there is some potential for confusion



Climate Policy - HFCs

■ Montreal Protocol

- Amendments proposed in 2014 would add HFCs to MP and slowly phase down their production
- Key elements:
 - List 19-21 specified HFCs as new Annex F to MP (NA proposal does not include two HFOs)
 - Make available funding under Multilateral Fund for HFC phase down
 - Limit HFC-23 byproduct emissions
 - Require licensing of HFC imports and exports, and ban imports and exports to non-Parties



Climate Policy - HFCs

- Montreal Protocol

- Micronesia:

- 15% reduction in 2017
 - 30% in 2020
 - 45% in 2023
 - 55% in 2026
 - 70% in 2029
 - 85% in 2032
 - 90% in 2035

- Developed country baseline would be based on 2014-2016 annual production and consumption of HFCs and HCFCs (excluding HFC-23)
 - Developing country baseline and phase down dates to be determined through negotiations by the Parties



Climate Policy - HFCs

- Montreal Protocol

- United States, Canada, Mexico:

- 10% reduction in 2018 - 70% in 2029
 - 35% in 2023 - 85% in 2035

- Developing country phase down would begin 2 years later in 2020 with a production freeze and reach the 85% reduction level 10 years later in 2045
 - Developed country baseline would be based on 2008-2010 annual production and consumption of HFCs and 85% of 2008-2010 annual production and consumption of HCFCs
 - Developing country baseline would be based on 2011-2012 annual production and consumption of HFCs and 40% of 2011-2012 annual production and consumption of HCFCs



Climate Policy - HFCs

■ Montreal Protocol

- Amendments will be discussed at MOP
- Fifth straight year that HFC phase down amendments are being considered
- Continued opposition from countries such as India, Brazil, Saudi Arabia, Venezuela
- Have not allowed formation of a contact group to begin formal negotiations
- Amendments not likely to pass this year



Climate Change - HFCs

- European Union F-gas Regulation
 - (EU) No 517/2014 adopted April 16, Official Journal May 20, applicable January 1, 2015
 - Gradual phase down in amount of bulk HFCs (GWP weighted) produced or imported in EU beginning with a freeze in 2015, reaching 79% reduction by 2030
 - Product bans, including: Fire protection systems and extinguishers that contain HFC-23 – January 1, 2016
 - No allocation fee for rights to produce/import



Climate Change - HFCs

- EU F-gas Containment Provisions
 - Intentional release of F-gases is prohibited
 - Requires training and certification for persons installing, servicing, maintaining, repairing or decommissioning fire protection systems
 - Requires the recovery of fire protection systems and extinguishers
 - Requires labeling of fire protection systems with name (now) and quantity in weight and CO₂ equivalents (January 1, 2017)



Climate Change - HFCs

- EU F-gas Allocation Provisions
 - By October 31 the EC will determine for each producer/importer a “reference value” based on annual averages in 2009 to 2012
 - Producers and importers intending to market HFCs in the EU in 2015 needed to register and submit their applications for 2015 HFC production/import quotas by July 1, 2014
 - Additional registration requirements for companies that haven’t previously reported



Climate Change - HFCs

- EU F-gas Allocation Provisions
 - An allocation is not needed to import fire protection equipment pre-charged with HFCs
 - Under Article 14 an allocation will be needed beginning in 2017 for refrigeration, air conditioning, and heat pump equipment pre-charged with HFCs, but not fire protection equipment



Climate Change - HFCs

- EU F-gas Reporting Provisions
 - Companies are required to report any import of fire protection equipment (systems and extinguishers) containing more than 100 tons of CO₂ equivalent HFCs
 - Report for 2014 imports due March 31, 2015
 - 100 tons of CO₂ equivalent =

| | |
|-----------------------|---------------------|
| HFC-227ea = 68 pounds | HFC-125 = 63 pounds |
| HFC-236fa = 22 pounds | HFC-23 = 15 pounds |



Climate Change - HFCs

- Japan HFC Policy
 - Act for Rationalized Use and Proper Management of Fluorocarbons takes effect on April 1, 2015
 - Producers/importers of HFCs will be required to develop phase-down plans
 - Examples of targets:
 - Room air conditioning products - GWP of 750 by 2018
 - Cold storage warehouses – GWP of 100 by 2019
 - Commercial air conditioning products for stores and offices – GWP of 740 by 2020



Climate Change - HFCs

- Australia Carbon Tax
 - Legislation to repeal the Australia carbon tax and the equivalent tax on synthetic greenhouse gases was approved on July 17, 2014 and is effective as of July 1, 2014
 - After July 1 the tax on HFCs does not apply
 - All tax liabilities incurred up to June 30, 2014 must be met in full
 - ACCC will monitor expected price reductions across all sectors with power to take action



FAA Halon ARC

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FAA Halon ARC

- On July 2, 2013 the FAA chartered a Halon Replacement Aviation Rulemaking Committee
- Halon ARC Members
 - Airframe Manufacturers
 - Equipment Manufacturers
 - Aviation Trade Associations
 - Fire Protection Trade Associations
 - Government

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FAA Halon ARC

- Objectives and Tasks
 - Committee will address the safety, environmental, and economic issues that affect the transition from halon to alternative agents
 - Review will take into account the timelines that have already been incorporated into ICAO Annexes, as well as those under review by other civil aviation authorities
 - Recommendation Report – Halon ARC will submit a report detailing recommendations as described above in early November 2014



FAA Halon ARC

- Factors to Consider
 - International standards
 - Status of alternative agents
 - Status of existing halon reserves
 - Feasible timelines for implementation of alternatives
 - Airworthiness approval issues
 - Environmental and economic issues

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FAA Halon ARC

- ARC did not begin work until November 2013
- Charter was extended to February 2015
- ARC met seven times between November 2013 and October 2014
- ARC report is almost complete and will be submitted to FAA in early November