



Environmental Update

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Overview

- Climate Change
 - Science
 - Policy - International, Europe, United States
 - HFCs - Montreal Protocol, EU F-gas Regulation, Australia Carbon Tax

- ICAO Resolution on Halons

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Climate Change - Science

- US Circuit Court of Appeals recently upheld EPA's Endangerment Finding on GHGs
- Court found that the Endangerment Finding was based upon solid scientific evidence
- Richard Mueller of University of California at Berkley, Berkley Earth Temperature Project
- Study found that earth's surface temperature has increased 1.6 degrees since the 1950s
- Dr. Mueller recently concluded that emissions from human activity are the cause

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Climate Policy - International

- Durban Platform for Enhanced Action
 - Adopted at COP 17 in November 2011
 - Negotiations began this year on a new legally-binding climate change accord to be signed by 2015 and come into force in 2020
 - New accord will include commitments for all countries, both developed and developing
 - EU agreed to extend the Kyoto Protocol until 2017, but Japan, Canada, and Russia did not

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Climate Policy - International

- Aviation – ICAO Resolution
 - Resolution on GHG emissions from aviation was adopted by ICAO in October 2010
 - 2% increase in fuel efficiency per year until 2050
 - Capping growth of aviation emissions in 2020
 - CO₂ standard for aircraft engines by 2013
 - Development of a framework for market-based measures
 - 13 countries have submitted “action plans” to ICAO outlining emission reduction efforts

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Climate Policy - Europe

- Beginning in 2012 aviation emissions are included in the European Union (EU) Emissions Trading System (ETS)
- Covers all airlines flying in/out of EU airports
- One allowance for every ton of CO₂ emitted
- Submit emissions report for 2012 by March 31, 2013 and pay allowances by April 30, 2013
- Initially 85% of allowances will be free (8 Euros)



Climate Policy - Europe

- Plan is opposed by most non-EU countries including the United States, Russia, and China
- Meeting of 17 non-EU countries in August in DC reaffirmed opposition to EU ETS
- Potential retaliatory tactics:
 - Barring national airlines from participating
 - Lodging a formal complaint with ICAO
 - Ceasing talks with European carriers on new routes
 - Imposing levies on EU airlines

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Climate Policy – United States

- US Congress unlikely to take action on GHGs regardless of election outcome
- EPA implementing regulations on large stationary sources, mandatory GHG reporting, and fuel efficiency standards for cars and trucks
- US Circuit Court of Appeals recently upheld stationary source and fuel efficiency rules
- California is moving forward with implementation of cap and trade program

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Climate Policy - HFCs

■ Montreal Protocol

- Amendments proposed in 2012 would add HFCs to MP and slowly phase down their production
- Key elements:
 - List 21 specified HFCs as new Annex F to MP
 - Make available funding under the Multilateral Fund for the phase down of HFC production
 - Strictly limit HFC-23 byproduct emissions resulting from the production of HCFCs (e.g. HCFC 22)
 - Require licensing of HFC imports and exports, and ban imports and exports to non-Parties

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Climate Policy - HFCs

■ Montreal Protocol

■ Micronesia:

- 15% reduction in 2015
 - 30% in 2018
 - 45% in 2021
 - 55% in 2024
 - 70% in 2027
 - 85% in 2030
 - 90% in 2032
- Developed country baseline would be based on 2004-2006 annual production and consumption of HFCs and HCFCs
 - Developing country baseline would be based on 2007-2009 annual production and consumption of HCFCs only
 - Developing countries would be subject to the same reduction schedule but with a six-year grace period (phase down would start in 2021 and reach 90% in 2038)

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Climate Policy - HFCs

■ Montreal Protocol

■ United States, Canada, Mexico:

- 10% reduction in 2016
- 30% in 2020
- 50% in 2025
- 70% in 2029
- 85% in 2033
- Developed country baseline would be based on 2005-2008 annual production and consumption of HFCs and 85% of 2005-2008 annual production and consumption of HCFCs
- Developing country baseline would be based on 2005-2008 annual production and consumption of HCFCs only
- Developing country phase down would begin 2 years later in 2018 with a production freeze and reach the 85% reduction level 10 years later in 2043

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Climate Policy - HFCs

- Montreal Protocol
 - 4th year that HFC amendments considered
 - Strong support from all developed countries, and many developing countries
 - 108 countries have signed the “Bangkok Declaration” on HFCs
 - Small group of countries including India, China, and Brazil continue to block progress

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Climate Policy - HFCs

- Montreal Protocol
 - Right now it seems extremely unlikely that the amendments would be agreed to this year
 - “Amendment fatigue” has set in for many delegates and observers who question whether it makes sense to spend another year considering the same issues
 - Proponents may need to determine if there are other ways to achieve acceptance

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Climate Policy - HFCs

- EU F-gas Regulation
 - 2007 law requires reporting, recovery containment, leak inspection, labeling, training for most applications of F-gases (HFCs, PFCs, SF6)
 - September report from European Commission concludes that the EU should take further action to reduce emissions of F-gases beyond the existing regulation
 - Proposal expected in December

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Climate Policy - HFCs

- EU F-gas Regulation
 - Draft proposal made public in September
 - Includes gradual phase down in amount of bulk HFCs (in tons of CO₂ equivalent) that can be produced or imported in EU beginning with a freeze in 2015 and reaching a 79% reduction in 2030
 - Also includes ban on use of HFC-23 in new fire protection systems and extinguishers as of January 1, 2015

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Climate Policy - HFCs

- Australia Carbon Tax
 - Clean energy plan includes carbon tax of \$23 per ton beginning July 1, 2012
 - Equivalent carbon price to be applied to HFCs under existing legislation
 - Covers imports of bulk HFCs and pre-charged equipment
 - Beginning July 1, 2013, incentives would be provided for destruction of ODS

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Climate Policy - HFCs

- Australia Carbon Tax
 - GWPs used for HFC tax based on SAR:
 - HFC-227ea = 2900, HFC-125 = 2,800, HFC-236fa = 6,300, HFC-23 = 11,700
 - Import one metric ton of HFC-227ea would incur a tax of \$66,700 (about \$30 per pound)
 - Metered dose inhalers and imported foam products are exempt, others considered on case-by-case basis

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ICAO Resolution

- Resolution A37-9 on halon replacement was adopted by ICAO in September 2010
 - Lavatory fire extinguishers for in-production aircraft after 31 December 2011
 - Handheld extinguishers for in-production aircraft after 31 December 2016
 - Engine/APU fire extinguishing systems for new designed aircraft after 31 December 2014
- ICAO Council approved amendments to Annex 6 and 8 of Chicago Convention in June 2011

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ICAO Resolution

- State letters for each amendment to Annexes
- In response to State letters a number of countries have filed differences
- Generally, EU countries filed differences based on Commission Regulation 744/2010
 - Cargo - cut-off date is 2018, end date is 2040
 - Cabin/crew portables - 2014, 2025
 - Engine nacelles and APU - 2014, 2040
 - Lavatory (potty bottles) - 2011, 2020

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ICAO Resolution

- FAA filed differences stating that they do not mandate use of halons and are still evaluating halon alternatives
- China's filed a difference changing the date for lavatory systems from 2011 to 2014 in order to amend their regulations and to certify and approve the relevant products

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ICAO Resolution

- State letter sent in May 2012 with a questionnaire asking for information on halon supplies available to aviation to support its future operations
- Responses have been received from many but not all States
- Will be discussed at ICAO IHRCM meeting