

How – and Where – to Control HFCs

Options for Making Faster Progress

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Climate Protection Opportunity

- HFCs are powerful heat-trapping gases.
- HFC production and use growing rapidly.
 - Largely due to demand created by phasing out CFCs and HCFCs.
- Very large climate protection opportunity if HFC growth can be quickly reversed in both developed and developing countries.

Key Characteristics of HFCs

- Deliberately manufactured for product applications
 - Contrast with CO₂ and other GHGs that are emission byproducts of energy or other processes).
- Producers and most industrial users located in limited number of countries.

Control Options

- More efficient, lower-leakage use.
- Recovery, recycling, and destruction.
- Substitution to lower-GWP HFCs.
 - New HFCs and blends with much lower GWP (e.g., 1300 → 4).
- Substitution to no-GWP alternatives
 - E.g., hydrocarbons

Phasing Down HFCs

- Set a phase-down schedule for HFCs
 - Technical and economic potential exists to reduce HFCs much faster than CO₂.
- Technical and economic issues:
 - Estimating end-use demand.
 - Timing of lower-GWP HFC and non-HFC alternatives.
 - Timing of product redesign (e.g., refrigerators, A/Cs).

International: Climate Treaty or Montreal?

- UNFCCC covers GHGs not controlled by the Montreal Protocol.
- CFCs and HCFCs are ozone-depleting GHGs controlled by Montreal.
- HFCs –
 - are not currently controlled under Montreal,
 - are covered under UNFCCC,
 - are part of 6-gas Kyoto basket.

Can Climate Talks Handle HFCs?

- Climate negotiators unlikely to focus on HFCs between now and Copenhagen.
- CO₂ “sucks all the oxygen from the room.”
- Climate negotiators do not have HFC-relevant expertise.
- Is there an alternative?

The Montreal Alternative

- Well-functioning, 20-year-old agreement, 190+ parties.
- Regulates related chemicals (e.g., CFCs, HCFCs).
- Phase-out commitments for both developed and developing countries.
 - Delayed schedule and technology/financial assistance for developing countries

Montreal's Climate Benefits

- CFC phase-out has delivered very large climate benefits.
- 11 billion metric tons CO₂-e in 2010 (5-6 times Kyoto reduction in 2010).
- Up to 16 billion tons CO₂-e achievable on cumulative basis between now and 2030 if HCFCs are replaced with low- and no-GWP alternatives.

Montreal's Climate Benefits

- CFC, HCFC benefits are not traded against the Kyoto basket
 - Montreal reductions do not result in more emissions of other GHGs.
- Technological and economic potential to cut HFCs much faster than CO₂.

Montreal's Advantages

- Focus, expertise.
 - Strong national capacity.
 - Technological and Economic Assessment Panel.
 - Multilateral Fund with balanced governance and strong track record.
- Simplicity, integration.
 - Regulates production/import, not emissions.
 - Ability to integrate HFC regime with CFC and HCFC phase-out (energy and ozone issues).

Montreal's Advantages

- Precedent and experience with developing country commitments.
 - Many rounds of agreed binding commitments, with grace period and funding.
 - History of adding chemicals, accelerating schedules.
 - Funding often enables early compliance.
- Simplification of Copenhagen agreement.
 - Complex agenda.
 - Potential for confidence building.

Issues for Consideration

- Legal authority to regulate HFCs under Montreal?
 - Montreal already recognizes climate effects of phasing out ozone depleters.
 - Montreal can regulate CFC/HCFC substitutes.
 - Amendment to add HFCs could include any needed changes to Montreal's scope.
 - UNFCCC/Kyoto pathway is no simpler or quicker, since amendments needed there too.

Issues for Consideration

- Climate gain depends on HFC schedule.
 - Phase-down must be faster, provide net climate benefits.
- Impact on the Kyoto basket.
 - Climate benefits lost if Montreal HFC cuts make more “space” for CO₂ in Kyoto basket.
 - Benefits secured by curbing HFC *production/consumption* under Montreal and removing HFC *emissions* from climate treaty.

Issues for Consideration

- May require new domestic options for funding the Montreal Multilateral Fund.
 - Contributing countries could continue funding through government appropriations.
 - Alternatively, countries could fund the HFC-related portion of Multilateral Fund by auctioning HFC allowances or through excise taxes.

Domestic: Create a Separate Cap, or Not

- Two bills propose to regulate HFCs separately from the main cap and trade program
 - Boxer-Lieberman-Warner (2008) proposed separate cap and trade for HFCs.
 - Waxman-Markey draft proposes HFC declining cap under Clean Air Act Title VI.
 - Phase-down plus excise fee and auction
 - Neither bill allows trading with other GHGs.

Issues for Consideration

- How much growth? How fast reductions?
 - Environmentalist support for separate HFC cap depends on significant climate gain.
 - Despite HCFC replacement, HFC growth must be quickly stopped and reversed.
 - Early action on key uses.
 - Auto A/Cs to new low-GWP HFCs
 - Home refrigerators to hydrocarbons

Issues for Consideration

- Range of views on domestic phase-down schedule:
 - Waxman-Markey bill proposes 3% annual reduction.
 - By contrast, CFCs were reduced at 12.5%/year, HCFCs at 6%/year.
 - Producers and NRDC views closely aligned on starting point and 3-4%/year reduction. Users want higher starting point, slower cuts.

Issues for Consideration

- Finding funds for the Montreal Multilateral Fund
 - Successful agreements under Montreal require limited financial assistance to developing countries.
 - Traditional approach – annual appropriations – is difficult.
 - New approaches in last year's bills: MLF funds could come from HFC allowance auction (Senate) or excise tax (House).

Next Steps: International

- U.S., other parties can propose HFC amendments to Montreal this spring.
 - HFC workshop and technical work scheduled for June.
- HFC amendment can be adopted in Cairo in November, building confidence for climate negotiations in Copenhagen.

Next Steps: Domestic

- New legislative proposals:
 - House Energy and Commerce working towards May deadline.
 - Senate Environment and Public Works working on bill.
- EPA action possible under existing Title VI and Supreme Court global warming ruling.

Thank you!

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