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 CO$_2$.

- 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.
- CO$_2$ “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 CO$_2$-e in 2010 (5-6 times Kyoto reduction in 2010).
- Up to 16 billion tons CO$_2$-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 CO$_2$. 
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 CO$_2$ 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
  - 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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