



INDUSTRY

Phasing Down Climate Potent HFCs

Action Statement and Plan

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CLIMATE SUMMIT 2014

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Phasing Down Climate Potent HFCs

Action Statement

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Private Sector: The Coca-Cola Company and Danfoss,

We, the supporters of this Joint Statement, support an amendment to phase down the production and consumption of hydrofluorocarbons (HFC) under the Montreal Protocol, while emissions accounting and reporting remains under the United Nations Framework Convention on Climate Change (UNFCCC) and we will work with others to begin formal negotiations in 2014.

We will take action to promote public procurement of climate-friendly low-global warming potential (GWP) alternatives whenever feasible and gradually transition to equipment that uses more sustainable alternatives to high-GWP HFCs.

We welcome complementary private sector-led efforts, including a Global Cold Food Chain Council to reduce the use and emissions of high-GWP HFCs and enhance energy efficiency in the cold food chain while minimizing food spoilage, and a Global Refrigerant Management Initiative on HFCs in servicing with a goal of reducing global emissions by 30-50 percent within 10 years.

Other supporters are encouraged to join, and can contact the CCAC Secretariat at ccac_secretariat@unep.org

Action Plan

This announcement builds on efforts launched by the CCAC through its initiative on promoting HFC alternative technology and standards, with a long-term goal of deploying commercially viable, energy-efficient, climate-friendly alternatives to high-GWP HFCs.

The Opportunity: HFCs are potent greenhouse gases that are substitutes for ozone-depleting substances being phased out under the Montreal Protocol, and their use is growing rapidly, increasing by as much as 10-15percent per year. By 2050, the radiative forcing is projected to increase by up to 0.4 W m^{-2} relative to 2000ⁱ. Fast action to address high-GWP HFCs would also catalyse gains in energy efficiency in refrigeration and air conditioning systems, thereby reducing electricity use and CO₂ emissions, consistent with past transitions under the Montreal Protocol, along with emissions of the HFCs themselves.

The Problem: HFCs are manmade greenhouse gases used principally in the refrigeration and air conditioning sectors. HFCs were created to replace chlorofluorocarbons (CFCs) and hydrochlorofluorocarbons (HCFCs), which were previously used in those sectors, but were or are being phased out under the Montreal Protocol because of their destructive impact on the ozone layer, while also having high GWPs. HFCs are potent greenhouse gases, with a warming effect hundreds to thousands of times more powerful than CO₂. HFCs presently represent only a small portion of the climate problem (about 1 percent of greenhouse gas emissions), but their rapid growth is taking place faster than any other greenhouse gas, also due to the phase out of ozone depleting substances occurring under the Montreal Protocol. A lack of action to prevent the growth of HFCs would greatly undermine efforts to limit global average temperature rise to less than 2°C.

Benefits of Solving the Problem: An HFC phase down could prevent warming of up to 0.1°C by 2050 and warming of up to 0.5°C by 2100,ⁱⁱ offering one of the most cost-effective climate mitigation strategies available to the world today. Recent demonstration projects initiated by the CCAC on commercial refrigeration where HFCs were replaced by climate friendly alternatives are expected to validate energy efficiency improvements that can be gained in the transition to low-GWP refrigerants.

How to Solve the Problem: Because HFCs are manmade, the best approach for reducing them is to gradually phase down their production and consumption, as was agreed by world leaders at the Rio+20 summit in 2012.ⁱⁱⁱ The Montreal Protocol has over 25 years of success in undertaking gradual phaseouts of the production and use of greenhouse gases—e.g., CFCs and HCFCs—manufactured for the same purposes as HFCs. The Montreal Protocol has the expertise and institutions needed for Parties to schedule, fund and implement a gradual phase down of HFCs over the next several decades. Alternatives to HFCs are available or are being introduced for many uses, and switching to these alternatives would not only lower the climate impact of refrigerant gases themselves, but would also catalyse energy efficiency gains in appliances that would both save consumers money and reduce emissions of carbon dioxide as well. The Montreal Protocol has successfully implemented phase downs of the CFCs and HCFCs that were previously used in the sectors now using HFCs, and has a financial mechanism to help developing countries implement policies and regulations, and to help with technology conversions.

CCAC case studies on alternative technologies in the commercial refrigeration sector show that the phase down of HFCs is not only possible but also presents a unique opportunity for fast action at low-cost. HFC inventories in 14 countries and technology demonstration projects in four countries supported by the CCAC will provide an understanding of HFC use.

The public sector can play a key role in promoting climate-friendly alternatives through their own procurement policies to reduce purchasing and transition over time away from high-GWP HFCs toward energy-efficient, low-GWP alternatives. In many countries, the public sector represents a significant share of the total use of HFCs.

The Global Cold Food Chain Council (GCFCC) aims to reduce the use and emissions of high- GWP HFCs and enhance energy efficiency in the cold food chain while minimizing food spoilage. The GCFCC will promote efforts that stimulate the demand for climate-friendly technology and reduce refrigerant emissions in the cold food chain. The GCFCC will work with individual businesses, associations, governments and civil society to promote alternatives to high-GWP HFCs and monitor progress towards the twin GCFCC goals in the cold food chain of: (1) promoting climate-friendly alternatives, and (2) enhancing energy efficiency.

The Global Refrigerant Management Initiative seeks to identify and explore opportunities to educate the industry's global supply chain on ways to improve the management of refrigerants to reduce leak and service emissions and to promote the recycling, recovery, reclaiming and end of life destruction of refrigerants. Through public and private sector cooperative efforts, the Initiative will seek to develop, through work with key associations, educational services in all appropriate languages, and initiate programs in cooperation with the United Nations Environment Programme and the Montreal Protocol implementing agencies and other relevant UN bodies to build awareness for proper management and servicing and refrigerant end-of-life practices.

Next steps after Climate Summit: The next step is to begin formal negotiations in November 2014 of an HFC amendment under the Montreal Protocol, and to begin organising private sector initiatives on refrigerant management and the cold food chain. Any interested parties are invited to indicate their interest to the CCAC Secretariat at ccac_secretariat@unep.org.

ⁱ HFCs: A Critical Link in Protecting Climate and the Ozone Layer - A UNEP Synthesis Report (2011)

ⁱⁱ Xu Y., Zaelke D., Velders G. J. M., & Ramanathan V. (2013) The role of HFCs in mitigating 21st century climate change, *ATMOS. CHEM. PHYS.* 13:6083-6089; see also Hare B. et al. (2012) CLOSING THE 2020 EMISSIONS GAP: ISSUES, OPTIONS AND STRATEGIES; and Ramanathan V. & Xu Y. (2010) The Copenhagen Accord for limiting global warming: Criteria, constraints, and available avenues, *PROC. NAT'L ACAD. SCI. U.S.A.* 107:8055-8062 (The Ramanathan & Xu study was the first to model the climate benefit of HFC mitigation in combination with SLCPs, CO₂, and other long-lived greenhouse gases.).

ⁱⁱⁱ see, *The Future We Want*, para 222