

JOIN US FOR A MOP SIDE EVENT

Cooling Efficiency: Benefits, progress & opportunities with keynote by Erik Solheim

Thursday 23 November 2017, 1:00pm - 2:20pm

Lunch provided

KIGALI
COOLING EFFICIENCY PROGRAM

CARBON
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COOLING EFFICIENCY: BENEFITS, PROGRESS AND OPPORTUNITIES

Cooling is essential to health, prosperity, and sustainability, underpinning many of the Sustainable Development Goals. Yet most cooling is energy intensive and highly polluting. Demand for cooling is booming, so there is an urgent need to cut cooling related pollution. Without action, cooling could account for almost 20% of global greenhouse gas emissions by 2050.

MONTREAL PROTOCOL

The 2016 Kigali Amendment to the Montreal Protocol could avoid up to 0.5°C of warming by phasing out F-gases used in cooling. Promoting the energy efficiency of cooling technology during the switch to climate-friendly refrigerants could double these benefits according to the Lawrence Berkeley Laboratory. The Montreal Protocol Technology and Economic Assessment Panel (TEAP) Working Group Report on Energy Efficiency highlights how to deliver these sustainable development benefits from cooling.

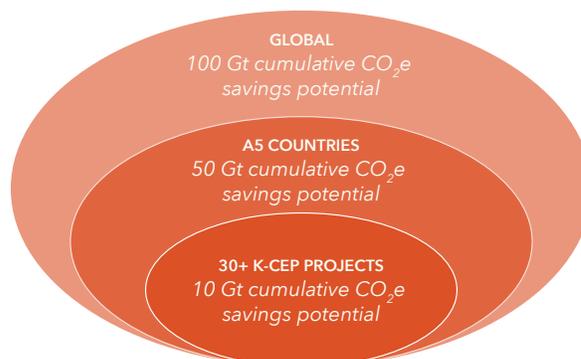
KIGALI COOLING EFFICIENCY PROGRAM

The Kigali Cooling Efficiency Program (K-CEP) envisages a world in which environmentally friendly, energy efficient cooling is accessible to all. K-CEP is designed to support countries, companies and communities in relation to the Kigali Amendment. K-CEP is deploying \$52 million of philanthropic funds to strengthen institutions, support policy, enable technology, leverage finance and help make cooling accessible for all.

NEW PROJECTS AND OPPORTUNITIES

Countries, companies and K-CEP partners have already identified opportunities to progress cooling efficiency across the world. This important yet modest contribution towards realizing the huge benefits of cooling efficiency is shown conceptually in Figure 1. Additional opportunities for cooling financing and access to cooling for all are being developed. K-CEP will share insights and lessons learnt to maximize program benefits as widely as possible.

Figure 1 – K-CEP contribution to realizing the cooling efficiency opportunity to 2050



All carbon savings numbers in Figure 1 relate to potential cumulative savings from now to 2050. They represent an initial, indicative view of savings potential and will be refined through further K-CEP funded work to improve consistency, attribution, and robustness.

The Montreal Protocol TEAP report identified three main opportunities for improving the efficiency of refrigeration and air conditioning (RAC) equipment: technology; financial; and policy, regulatory and information. We have mapped these opportunities with early projects K-CEP is supporting in response to requests from countries and companies (Figure 2).

	TECHNOLOGY IMPROVEMENTS	POLICY, REGULATORY AND INFORMATION	FINANCIAL AND RELATED INCENTIVES
FOCUSED K-CEP SUPPORT	<p>Enabling technology projects Support to RAC manufacturers and supermarkets to enhance efficiency whilst phasing down F-gases. (Bangladesh, Brazil, Jordan, Lebanon, Mexico, Morocco, Tunisia, Ecuador, Guatemala, Uganda)</p>	<p>National cooling plans Support to develop cooling plans that can inform HPMPs and Nationally Determined Contributions (NDCs). (Bangladesh, Brazil, Chile, China, Costa Rica, Cuba, Egypt, Ghana, Lebanon, Malaysia, Nigeria, Panama, Philippines, Rwanda, Sri Lanka, Thailand, Trinidad & Tobago, Uruguay, Venezuela, Vietnam)</p> <p>Standards & labeling policy Minimum energy performance standards and labeling for commercial and residential air conditioning and refrigeration. (Brazil, Bangladesh, China, Egypt, Kenya, Lebanon, Mexico, Philippines, Rwanda, Thailand, Vietnam)</p> <p>Model standards for RAC technology</p> <p>Compliance Monitoring, verification and import controls (Brazil, China, ECOWAS, Egypt, Ghana, Kenya)</p>	<p>Financial incentives Bulk procurement, rebates and/or other financial mechanisms. (Brazil, Caribbean, China, Ghana, Kenya, Lebanon, Mexico, Nigeria, Pacific)</p> <p>Finance Window In development - further details to be confirmed early 2018.</p> <p>Report on options for financing cooling efficiency</p>
CROSS-CUTTING K-CEP SUPPORT	<p>Training & capacity building Support to ozone and energy policy makers, RAC SMEs, service sector</p>		
	<p>Cooling for All Identifying the best solutions to make clean cooling accessible for all</p>		

K-CEP PROJECT EXAMPLES

SE4ALL Cooling for All

The new Cooling for All initiative focuses on pathways to improve access to cooling that are locally appropriate and sustainable. Cooling for All has assembled a Global Panel which brings together high-level leaders from government, academia, civil society, business, philanthropy and finance. Together the Panel will help to spur action and political leadership, answer prominent cooling questions, and produce a public report on how to unlock the cooling for all opportunity.

“The good news is that energy-efficient cooling technology already exists. Business is ready to help make it a reality for all”.

– Jürgen Fischer, President, Danfoss Cooling

UN Environment “twinning” and training for 147 countries

UNE will “twin” national ozone officers and energy efficiency policy makers through training and support for data collection. It will work through the established Ozone Action Compliance Assistance Programme which covers 147 developing country clients in 10 regional networks.

Rwanda - UN Environment

Demand for refrigerators and room air conditioners is forecast to boom in Rwanda as access to electricity improves and incomes increase. This project will support:

- A national cooling strategy;
- Development and implementation of minimum energy performance standards and labels;
- Awareness of energy efficient and climate-friendly cooling products.

UNDP and World Bank cooling plans

This project will support the development of national cooling plans that integrate cooling efficiency with the F-Gas transition. Countries include: Chile, Costa Rica, Cuba, Panama, Trinidad & Tobago, Uruguay, Venezuela, Malaysia, Philippines, Bangladesh, Sri Lanka, Ghana, Nigeria, and Lebanon, Thailand, and Vietnam.

Brazil - iCS

This program will enable policies to increase minimum standards of air conditioner energy efficiency, enhance labeling and support market transformation.

‘An excellent opportunity to deepen the knowledge and improve the public policies of energy efficiency’.

– Carlos A. Principe Pires, Director, Department of Energy Development, Ministry of Mines and Energy.

China - Energy Foundation China

China accounts for over 70% of the global market for air conditioners. This program aims to deliver large scale greenhouse gas emissions reductions through significant efficiency improvements in residential and commercial air conditioning in China. It will develop energy efficiency standards and labels and complementary market transformation programs.

‘China will make sustained efforts to promote cooling efficiency’.

– Wang Shancheng, Deputy Director General of the Department of Resource Conservation and Environmental Protection, NDRC.

K-CEP AT THE CROSS-ROADS OF 21ST CENTURY GLOBAL CHALLENGES

K-CEP sits at the cross-roads of the Montreal Protocol, the United Nations Framework Convention on Climate Change, and the Sustainable Development Goals. K-CEP focuses its support to developing countries on the energy efficiency of cooling to increase and accelerate the climate and development benefits of the Kigali Amendment to phase down hydrofluorocarbons. K-CEP focuses primarily on air-conditioning and refrigeration, however other cooling solutions such as building design, shading, cool roofs, and super-efficient fans are considered in our work on access to cooling. K-CEP seeks to achieve the following outcomes by 2020.

Category	Outcomes
Policies, plans, standards	<ul style="list-style-type: none">• Approximately 10 countries formally propose, adopt, or implement best practice cooling efficiency policies, standards, or programs.• At least 10 countries add cooling efficiency policies, standards, or programs to their NDC.• More than 10 countries publish energy efficiency management plans to integrate energy efficiency into their refrigerant transition.
Cooling efficiency in the real world	<ul style="list-style-type: none">• High-efficiency technology increases its market penetration in target markets.• The number of people with increased access to efficient, low global warming potential (GWP) cooling increases.• Efficient, low GWP cooling is elevated to a priority development issue.
Business and finance	<ul style="list-style-type: none">• Corporate "cooling efficiency" buyers and/or sellers clubs reduce the price and expand the market share of high-efficiency technologies.• K-CEP leverages more than \$250 million.
Montreal Protocol	<ul style="list-style-type: none">• Countries commit to or initiate an accelerated HFC phase down (with best practice energy efficiency).• The Montreal Protocol report (by the TEAP), guidance (from the ExCom), and funding (including the \$27 million pledge by governments at Kigali) reflect energy efficiency best practices.• Parties start translating energy efficiency management plans into their official HCFC and HFC management plans.

Kigali Progress Tracker

In order to track progress against business-as-usual, and support the prioritization of cooling efficiency, the International Energy Agency is developing the Kigali Progress Tracker. The tracker will collect new data, and integrate it into a technology and policy database, that will generate insights into cooling emissions, markets and policies. The tracker will also enable K-CEP to monitor its impact. The tracker is part of the IEA's new Global Exchange Hub for Energy Efficiency. www.iea.org

K-CEP PARTNERS

K-CEP works in partnership with UN agencies (UN Environment, UNDP, UNIDO), the World Bank, the International Energy Agency, SE4All, and a growing coalition of NGOs, businesses, academia and civil society organizations around the world.

ABOUT K-CEP

The Kigali Cooling Efficiency Program (K-CEP) is a philanthropic collaboration launched in 2017 to support the Kigali Amendment of the Montreal Protocol and the transition to energy efficient, climate-friendly, affordable cooling solutions for all. K-CEP's secretariat, the Efficiency Cooling Office, is located at the ClimateWorks Foundation.