

EUROPE AND CENTRAL ASIA (ECA) OZONE2CLIMATE MEETING WITH MONTREAL PROTOCOL OFFICERS AND RAC ASSOCIATIONS / EXPERTS AND PARTICIPATION IN SMEITS / KGH'S 50TH INTERNATIONAL HVAC&R CONGRESS AND EXHIBITION IN BELGRADE, SERBIA, 4-6 DECEMBER 2019

INFORMATION NOTE

Introduction

This meeting has been organized by the Regional Montreal Protocol Network for Europe and Central Asia (ECA network) of UNEP Law Division's OzonAction Programme in cooperation with Ministry of Environmental Protection of Serbia, the national HVAC&R Association SMEITS / KGH and UNDP Serbia.

It is part of the regional network services which OzonAction's Compliance Assistance Programme (CAP) provides to Article 5 (developing) countries as an implementing agency of the Multilateral Fund for the Implementation of the Montreal Protocol.

The meeting took place in parallel with the 50th International HVAC&R Congress and Exhibition organized by SMEITS / KGH taking place in Belgrade, Serbia, 4-6 December 2019. This allowed representatives of the national RAC associations / RAC experts to participate in selected sessions of the conference and learn about latest technology developments in industrial, commercial and domestic refrigeration and air-conditioning, safety.

In the past, similar approaches to arrange ECA meetings in parallel to international conferences proved to be successful and cost-efficient and exposed the RAC experts to latest technology developments:

- 13th IIR Gustav Lorentzen Conference on Natural Refrigerants taking place in Valencia, Spain, in June 2018
- 7th IIR Conference on Ammonia and Carbon Dioxide Technologies in Ohrid, Macedonia FYR, in May 2017.
- 47th International KGH Congress and Exhibition on Heating, Refrigeration and Air-conditioning in Belgrade, Serbia, in November 2016.



The ECA network has longstanding cooperation with Serbia's national refrigeration and air-conditioning (RAC) association SMEITS / KGH and has organized technology roundtables and exhibition booths as part of Serbia's HCFC phase-out management plan (HPMP) at the SMEITS / KGH congresses since 2011.

In 2019, it is the 50th International HVAC&R Congress and Exhibition organized by SMEITS / KGH and UNEP has been selected to be awarded for the longstanding support and cooperation provided. The congress website is: <http://kgh-kongres.rs/index.php/en/>.



This event was therefore a welcome opportunity to allow Montreal Protocol officers and representatives of RAC associations / experts from the ECA region to participate in the International HVAC&R Congress and Exhibition organized by SMEITS / KGH and the technology roundtable organized by ECA OzonAction.

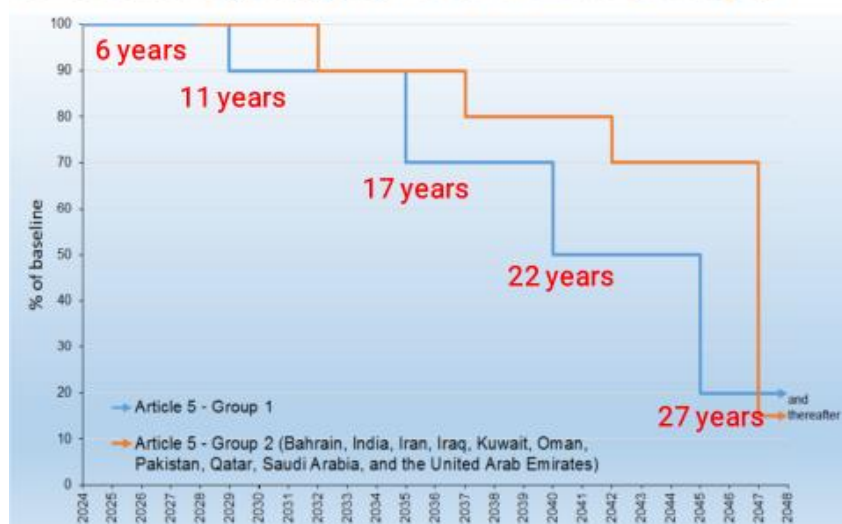
Background

The meeting took place in the context of the Kigali Amendment, which has been agreed by the parties to the Montreal Protocol in 2016. It aims to phase-down high global warming hydrofluorocarbons (HFCs) and transforms the Montreal Protocol into a powerful treaty for climate protection. It is expected to significantly contribute to the objectives of the Paris Agreement i.e. reducing the global warming by 0.4 degrees C by 2100.

It entered into force in January 2019 and introduced control measures for HFC production and consumption (baseline, freeze and gradual reduction steps), extended the licensing system requirements and reporting obligations to HFCs and will ensure financial support for developing countries to phase-down high global warming HCFs.

The first control measures for developing countries is the freeze in production and consumption of HFCs at the baseline level in 2024 for group 1 countries. Group 1 countries will achieve a 10% reduction in 2029 and a final reduction of 80% below the baseline in 2045.

HFC reduction in Article 5 countries 80% in 2045 (Group 1) - 85% in 2047 (Group2)



As of November 2019, the Kigali Amendment has been ratified by 88 parties including Albania, Armenia and Montenegro. The countries are now focusing on setting up institutional and legal framework to prepare for the HFC phase-down under the Kigali Amendment. This includes the establishment of licensing and quota system for HFCs, enhancing training on the containment of HFCs and the safe use of HFC alternatives including natural refrigerants, adopting safety and performance standards, introducing certification schemes for technicians and log-books for RAC equipment. It also requires closer cooperation with national climate focal points and energy efficiency experts.

Outputs and impact

Meeting participants were acquainted with latest ozone- and climate-friendly technologies and attended the Ozone2Climate technology roundtable which was organized by UNEP and SMEITS / KGH as part of Serbia's HCFC phase-out management plan (awareness component). They discussed recent technology



developments and the relevance of energy-efficiency of RAC equipment for climate protection and the Kigali Amendment implementation. The participants had the opportunity to strengthen their networks with international RAC experts and among Montreal Protocol officers and representatives of RAC associations. It is expected that Montreal Protocol officers are in a better position to take informed decisions when setting policies and developing HCFC phase-out and HFC phase-down strategies. And representatives of RAC associations have in mind clearer roadmaps of necessary RAC sector actions to comply with the Montreal Protocol provisions.

Observations and conclusions



The conference organizer SMEITS KGH provided excellent logistical support in cooperation with UNDP Serbia. The ECA meeting was organized with rather short notice using additional CAP funding. It was attended by all ECA countries except Albania because of the emergency related to the earthquake.

Additional experts included Mirjana Ilijin (UNIDO), Didier Coulomb (IIR), Alex Pachai (Johnson Controls), Kemal Fayraktar (REHVA, TTMD), Vasil Eftimov (RAC expert), Slobodan Peijkovic (SMEITS / KGH) and Tonko Curko (AREA, Croatian RAC association).

The agenda of the technology roundtable included presentations on CO₂ air-conditioning in high-speed trains, trends in industrial refrigeration, heat pumps for cooling, heating and hot water production, ammonia heat pumps, monitoring energy efficiency, climate change and HVAC&R systems, Kigali Amendment and OzonAction resources, implementation of enabling activities in Serbia, F-gas regulation and Real Alternatives initiative in Croatia, refrigerant recovery, recycling and reclaim (RRR), new manufacturing plant of ammonia systems in Serbia, using NH₃ safely, water-water heat pumps, CO₂ commercial systems using ejector technology, comparative analysis of electricity consumption, air-water heat pump modelling, comparative refrigerants study and R22 alternatives in ice ring applications.



Meeting documents

The tracking of table of RAC sector actions is attached as Annex I. Meeting documents including the recommendations and presentations will be made available from the OzonAction website / meeting portal:

www.unenvironment.org/ozonaction/networks/europe-central-asia

www.ozonactionmeetings.org/europe-and-central-asia-eca-ozone2climate-meeting-montreal-protocol-officers-and-rac-associations-4 .

Contacts

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Annex: ECA tracking table of RAC sector actions (English)

RAC sector actions	ALB	ARM	BiH	GEO	KYR	MDN	MOL	MNE	SER	TUR	TKM	ROM
RAC association												
RAC association operational	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	PLA	YES
RAC association congress	NO	NO	NO	YES	YES	NO	NO	NO	YES	YES	NO	YES
RAC association publications	PLA	NO	PLA	NO	YES	NO	NO	NO	YES	YES	PLA	YES
RAC association website	PLA	NO	YES	NO	YES	YES	YES	NO	YES	YES	PLA	YES
RAC association involved in HPMP activities	YES	YES	YES	YES	YES	YES	YES	PLA	YES	YES	NO	YES
Training on good practices and containment (HCFC, HFC)												
Training needs assessment related to HCFC and HFC technologies	YES	YES	YES	YES	YES	YES	PLA	YES	YES	YES	YES	YES
Training center with trained trainers and HCFC / HFC equipment	YES	YES	YES	YES	YES	PLA	YES	PLA	YES	YES	YES	YES
Code of good practice for HCFC / HFC technologies	YES	NO	PLA	YES	YES	YES	YES	YES	YES	YES	NO	YES
Training curriculum on good practices and containment	YES	NO	YES	YES	YES	YES	YES	PLA	YES	YES	YES	YES
Training on good practices and containment (mandatory)	NO	PLA	PLA	PLA	NO	YES	YES	YES	YES	YES	YES	YES
Training on good practices and containment (voluntary)	YES	PLA	YES	YES	YES	YES	NO	NO	NO	YES	YES	YES
Certification on good practices and containment (mandatory)	PLA	PLA	PLA	YES	YES	YES	YES	YES	YES	YES	NO	YES
Certification on good practices and containment (voluntary)	NO	PLA	YES	NO	NO	YES	NO	NO	NO	YES	YES	YES
Training on safe use of alternative technologies (HC, CO2, NH3, HFO)												
Training needs assessment related to alternative technologies	PLA	PLA	YES	YES	PLA	YES	PLA	YES	YES	?	PLA	YES
Training center with trained trainers and alternative equipment	PLA	YES	PLA	NO	PLA	PLA	NO	PLA	NO	YES	PLA	YES
Code of good practice for alternative technologies	PLA	NO	PLA	NO	PLA	PLA	YES	PLA	NO	YES	NO	YES
Training curriculum on safe use of alternative refrigerants	PLA	NO	PLA	NO	PLA	PLA	PLA	PLA	NO	?	PLA	YES
Training on safe use of alternative refrigerants (mandatory)	PLA	PLA	PLA	NO	PLA	PLA	NO	PLA	NO	?	PLA	PLA
Training on safe use of alternative refrigerants (voluntary)	YES	PLA	YES	YES	NO	PLA	YES	?	YES	YES	YES	YES
Certification on safe use of alternative refrigerants (mandatory)	YES	PLA	PLA	NO	PLA	PLA	NO	PLA	NO	?	PLA	PLA
Certification on safe use of alternative refrigerants (voluntary)	NO	PLA	YES	NO	NO	PLA	NO	?	PLA	?	NO	YES
Safety standards for alternative technologies												
Safety standards for alternative refrigerants (mandatory)	PLA	NO	PLA	NO	PLA	PLA	NO	?	YES	PLA	NO	YES
Safety standards for alternative refrigerants (voluntary)	YES	YES	YES	YES	YES	YES	YES	YES	YES	PLA	NO	YES
Equipment logbooks and inventories												
HCFC equipment logbooks and inventories	PLA	PLA	PLA	YES	YES	YES	YES	YES	YES	NO	NO	YES
HFC equipment logbooks and inventories	PLA	PLA	PLA	YES	PLA	YES	PLA	YES	YES	PLA	NO	YES
Energy-efficiency measures												
Energy-efficiency legislation	YES	YES	YES	NO	PLA	YES	YES	YES	YES	YES	PLA	YES
Energy-efficiency labelling for equipment	YES	PLA	YES	NO	PLA	YES	?	YES	YES	YES	PLA	YES
Minimum energy-efficiency performance standards (MEPS)	PLA	PLA	PLA	NO	PLA	YES	?	YES	NO	PLA	PLA	YES
Ozone- and climate-friendly technologies												
Existing examples of ozone- and climate-friendly technologies	YES	YES	YES	YES	YES	YES	YES	?	YES	YES	YES	YES
Pilot or demonstration projects related to alternative technologies	NO	YES	NO	PLA	YES	PLA	YES	?	NO	YES	PLA	YES
Import bans or restrictions for HCFC products / equipment	YES	YES	YES	PLA	YES	YES	YES	YES	YES	YES	YES	YES
Import bans or restrictions for HFC products / equipment	NO	NO	NO	NO	NO	PLA	NO	PLA	NO	PLA	NO	YES
Placing on the market bans or restrictions for HCFC products / equipment	PLA	NO	PLA	NO	NO	YES	NO	YES	YES	YES	NO	YES
Placing on the market bans or restrictions for HFC products / equipment	NO	NO	NO	NO	NO	PLA	NO	PLA	NO	PLA	NO	YES
Financial mechanisms (incentives, taxes or tax exemptions)	PLA	PLA	PLA	NO	PLA	YES	NO	NO	NO	?	NO	PLA
Environmental fund (to finance incentives, destruction etc.)	NO	NO	PLA	NO	NO	NO	NO	PLA	NO	YES	NO	PLA
Refrigerant recovery and recycling												
Refrigerant recovery and recycling center operational	YES	YES	YES	YES	YES	NO	YES	NO	NO	PLA	NO	YES
Other RAC sector actions												
Ban of non-refillable refrigerant cylinders	YES	NO	PLA	NO	YES	YES	NO	PLA	PLA	YES	PLA	YES
Labeling of refrigerant cylinders	YES	NO	NO	NO	YES	NO	PLA	PLA	YES	YES	PLA	YES
Emission control measures (ban on venting, leakage detection)	YES	NO	YES	PLA	YES	YES	YES	YES	YES	YES	PLA	YES
Ban on new installations (HCFC, HFC)	PLA	NO	PLA	NO	PLA	PLA	YES	PLA	NO	YES	NO	YES
Use of UNEP OzonAction training materials and tools	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES	YES
Date of last up-date	12.19	12.19	11.19	12.19	11.19	11.19	11.19	12.19	12.19	11.19	12.19	12.19
YES = Implemented PLA = Planned to be implemented NO = Not planned to be implemented ? = Unknown												