

Draft MAC Side Event Track Edited in Word from text now on Ozone Secretariat website

Title: Advancing Energy Efficient Low-GWP Technologies in Mobile Air-Conditioning and Heat Pump Systems in Article 5 Developing Parties

Description: This side event will demonstrate the transition to low-GWP, energy efficient refrigerants in the motor vehicle air-conditioning and heat-pump (MAC) sector.

Presentations will focus on 1) pilot applications of natural refrigerant carbon dioxide (CO₂ -R-744) in China and natural refrigerant propane (R-290) in India under the CCAC/UNIDO projects, including technical feasibility and implementation challenges; 2) Bangladesh's focus on energy efficiency in MACs under the Kigali Implementation Plans (KIPs); 3) leadership of the Society of Indian Automobile Manufacturers (SIAM) in an integrated strategy of best MAC service practices during the rapid phaseout of R-134a and the transition to all electric vehicles; and 4) progress by SAE International in the global choice of R-290 for heat pump systems in all-electric vehicles with co-benefits of affordability, driving range, and system reliability.

Take Away: Leapfrog obsolete internal combustion vehicles to electric vehicles with R-290 secondary-loop heat pumps to avoid climate tipping points, go beyond Kigali Amendment compliance, and to improve thermal comfort, safety, and long driving range and battery life. Provide training and tools to minimize refrigerant emissions in existing vehicle and to set the stage for flammable refrigerants such as R-290.

Agenda:

Brief Welcome: Denise San Valentin (CCAC), Stephen O. Andersen (IGSD), and Yunrui Zhou (UNIDO).

Mr. Timothy Craig (Melrose Technologies, Virtual): *SAE Thermal Management Refrigerant Cooperative Research Project*

Mr. Sangeet Kapoor, Mr. Santosh Venu (Tata Motors, Virtual) and Dr. Rashid Hassan (SIAM, Virtual): *India Advancing Low-GWP Technologies and Workforce Readiness in the MAC Sector*

Mr. Jiabo Ren (CATARC): *China National Strategy to Phase Down HFCs in the Mobile Air Conditioning*

Mr. Md. Mahiuddin Manik: Bangladesh Challenges and Opportunities in Implementing the Kigali Amendment for MACs

Dr. Stephen O. Andersen: Side Event Summary and Thanks to All

CATARC: China Automotive Technology & Research Center

CCAC: Climate and Clean Air Coalition

IGSD: Institute for Governance & Sustainable Development

MoEFCC:	Ministry of Environment, Forest and Climate Change
SIAM:	Society of Indian Automobile Manufacturers
UNIDO:	United Nations Industrial Development Organization