WRITTEN VIEWS SUBMITTED BY TUNISIA
AND THE CO-OPTED MEMBER, CAMEROON, PURSUANT TO DECISION 93/103

Inputs from the Government of Tunisia (Original in French)

1. The refrigeration industry plays a crucial role in the economic development of most countries, particularly the developing countries listed in Article 5 of the Montreal Protocol. It is involved in many industries and fields of activity.

2. In many countries, such as Tunisia, the refrigeration, air-conditioning, and heat pump industry consumes around 28 per cent of the total electricity produced nationwide and makes a major contribution to greenhouse gas emissions in terms of CO_2 equivalent (direct and indirect emissions).

3. The improper handling of fluorinated refrigerants by technicians and service companies operating in the refrigeration and air-conditioning (RAC) industry results in the consumption of large quantities of refrigerants and electricity:

(a) Technicians do not recover refrigerants when repairing refrigeration systems;

(b) Technicians are not equipped with the necessary equipment such as recovery stations, recovery cylinders, electronic leak detectors, brazing under nitrogen flow to prevent oxidation of copper piping (calamite), refrigerant analyzers to ensure refrigerant quality, etc.;

(c) Most RAC technicians are not certified;

(d) In developing countries, there is no system for regenerating and disposing of contaminated refrigerants, etc.;

(e) Lack of regulatory frameworks for the proper management of fluorinated refrigerants;

(f) The absence of laboratories to verify the energy classes of locally manufactured or imported RAC equipment; and

(g) Lack of knowledge of how to dispose of refrigerants at end-of-life.

4. On the basis of the foregoing, and to enable developing countries (Article 5) to implement the Kigali Amendment, the following actions should be taken into consideration when applying the Kigali Amendment:

(a) Establish a national system for verifying the energy efficiency of locally manufactured or imported refrigeration equipment, particularly domestic equipment, by setting up a laboratory to test and verify energy efficiency, and develop relevant standards and codes;

(b) Compulsory labelling of refrigeration equipment;

(c) Strengthen countries' technical capacities in cold chain development, integrating green technology based on the use of refrigerants with low global warming potential;

(d) Apply principle of circularity for sustainable management of fluorinated refrigerants, through the following actions:

(i) Make it compulsory to recover fluorinated refrigerants when servicing RAC systems;

(ii) Analyze refrigerants to ensure their purity;

(iii) Recycle fluids on site at the RAC installation;

(iv) Regenerate, if possible, contaminated refrigerants (pure refrigerants such as HCFC-22, HFC-134a);

(v) Separate the components of blended refrigerants, as they are difficult to regenerate;

(vi) Reuse separated and/or regenerated refrigerants;

(vii) Periodically check refrigeration and air-conditioning systems for leaks, depending on the refrigerant load;

(viii) Establish a system for disposing of highly contaminated refrigerants at the end of their useful life;

(e) Have a regulatory framework for the life cycle and management of refrigerants, integrating all the above aspects; and

(f) Accelerate the rate of certification of technicians and service companies operating in the RAC industry.

Inputs from the Government of Cameroon

5. The cooling sector plays a crucial role for the economic development of if not all countries in the world, more especially developing countries listed in Article 5 of the Montreal Protocol. These involve domestic, residential, commercial refrigeration and air conditioning as well as mobile air-conditioning (MAC).

6. The refrigeration and air-conditioning sector's potential for CO_2 emission mitigation, accounting for 80 per cent of the total emission in some countries in the context of the Kigali Amendment, underscores its significance in global climate action. The projected surge in global refrigeration, air-conditioning, and heat pump (RACHP)-related energy consumption, expected to increase 33-fold by 2100 in a business as usual scenario, emphasizes the urgent need for energy efficiency interventions. Energy-efficient technologies, proven and market-ready, now have a stronger business case due to escalating energy supply costs.

7. Cameroon like many other countries in the subregion, refrigeration, air conditioning and heat pump sector consumes about 20 per cent of all electricity produced nationally (NDC, 2021), and contributes significantly to the emission of a large quantity of greenhouse gas in terms of CO_2 equivalent (direct and indirect emissions).

8. Poor handling of fluorinated refrigerants recorded by service technicians in workshops and companies operating in the RAC sector as well as old equipment may be sources of consumption of large quantity of refrigerants and electricity. For example in Cameroon:

(a) Technicians do not recover refrigerants during repair operations;

(b) Very insignificant technicians are equipped with necessary equipment such as recovery station, recovery bottles, electronic leak detectors, brazing under nitrogen flow to avoid oxidation of copper pipes (catamite), as well as refrigerant analysers to ensure the quality of refrigerants, etc. Equipment provided to them by the National Ozone Unit;

(c) Most RAC technicians especially from the informal sector are not certified;

(d) Absence of regulatory frameworks for the correct management of fluorinated refrigerants even though the code of good practice exists;

(e) Importation of second handed RAC equipment;

(f) Absence of laboratories for verifying the energy classes of RAC equipment imported; and

(g) No disposal mechanisms for end-of-life refrigerants and equipment containers.

9. For a better implement the Kigali Amendment based on what has been mentioned above, more particularly for developing countries (Article 5), the following actions should be taken into consideration:

(a) Elaboration of a National Cooling Action Plan that would incorporate a national system for Minimum energy performance standards for verifying the energy efficiency of refrigeration equipment manufactured imported, particularly domestic equipment, through the establishment of an energy efficiency testing and verification laboratory, and develop the relevant standards and codes;

(b) A mandatory labelling mechanism for refrigerant equipment and air-conditioning;

(c) Strengthen the technical capacities of countries in the development of the cold chain, by integrating green technology based on the use of refrigerants with low global-warming potential;

(d) Installation of RAC recycling stations to ensure reuse of separated and/or regenerated refrigerants;

(e) Put in place a regulatory framework on the life cycle and management of refrigerants;

(f) Incorporate end-of-life destruction facility(centre); and

(g) Accelerate the certification of all service technicians in RACHP and MAC sectors.