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The Implication of Kigali Amendment to the R/AC Industry

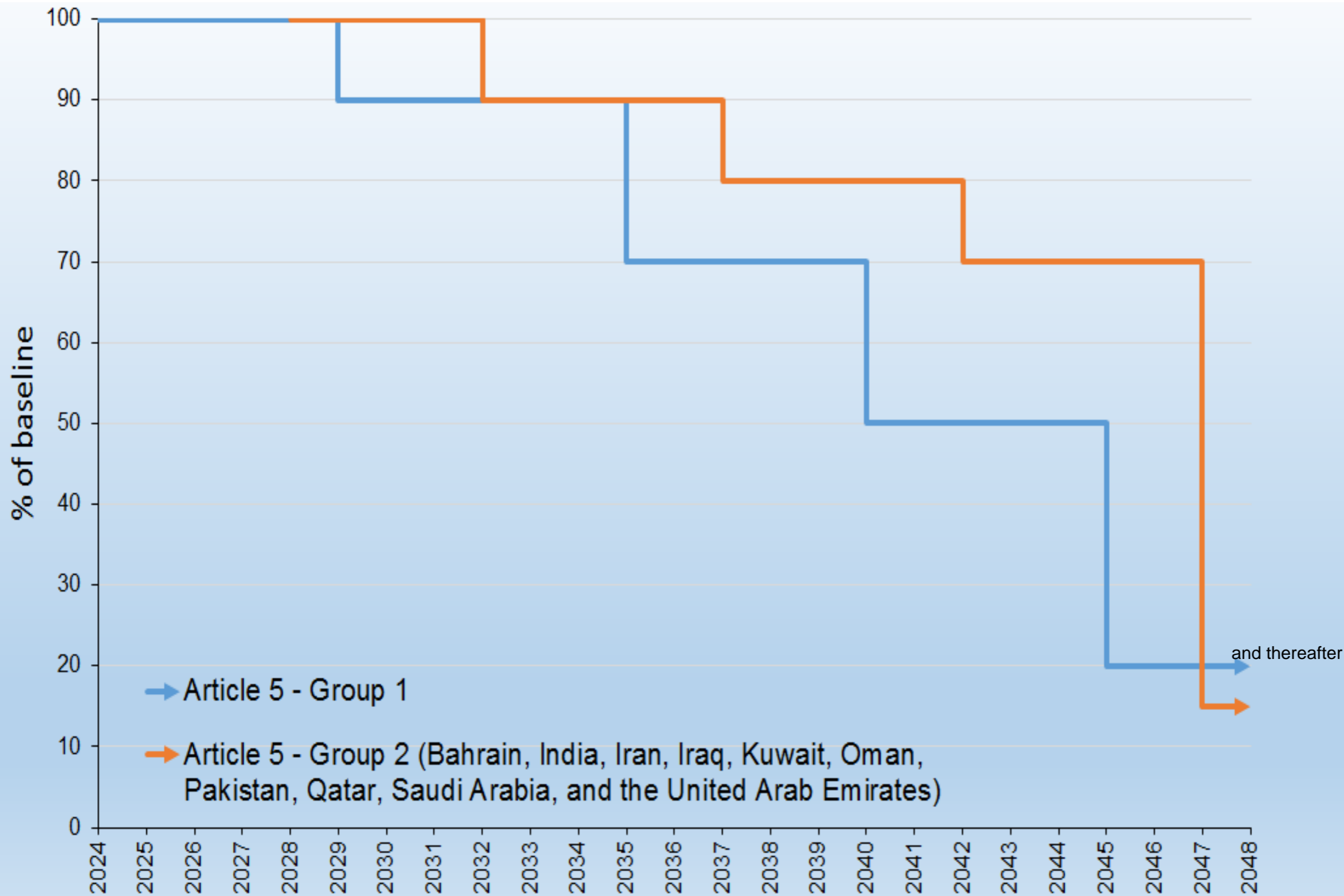
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Summary for Article 5

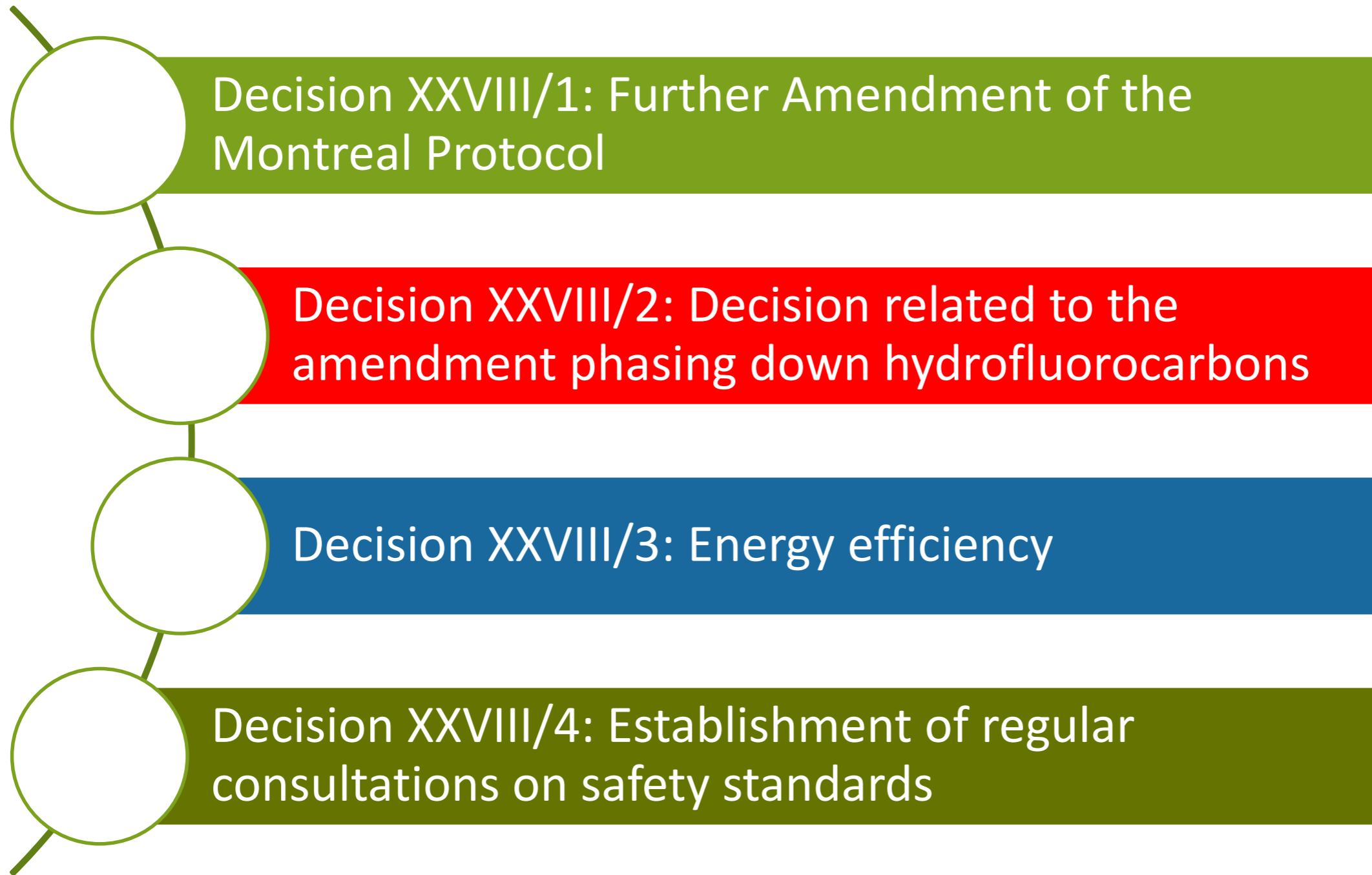
	Article 5 Parties: Group 1		Article 5 Parties: Group 2	
Baseline Years	2020, 2021 & 2022		2024, 2025 & 2026	
Baseline Calculation	Average production/consumption of HFCs in 2020, 2021, and 2022 plus 65% of HCFC baseline production/consumption		Average production/consumption of HFCs in 2024, 2025, and 2026 plus 65% of HCFC baseline production/consumption	
Reduction steps	2024		2028	
Freeze	2024		2028	
Step 1	2029	10%	2032	10%
Step 2	2035	30%	2037	20%
Step 3	2040	50%	2042	30%
Step 4	2045	80%	2047	85%



HFC Phase-down schedule – Article 5



Decisions of 28th MOP Meeting



Other Main Points (1)

Production, consumption, imports, and exports of HFCs shall be expressed in carbon dioxide (CO₂) equivalents.

There is an exemption for high ambient temperature countries

Import and export licensing systems for HFCs must be in place by 1 January 2019

Avoid double conversion, in particular industrial process refrigeration

Trade with Parties that have not ratified the Amendment ("non-Parties") will be banned from 1 January 2033.

Multilateral Fund to support HFC phasedown

Entry into force on 1 January 2019, provided that it is ratified by at least 20 Parties (or 90 days after ratification by the 20th Party, whichever is later).



Other Main Points (2)

Safety

- Training in manufacture and servicing sector
- Certificate for technicians
- Servicing Tools
- Increasing funding level

Energy Efficiency (EE)

- Support maintaining and/or enhancing EE activities
- Review and share opportunity, programme, initiative, etc

Institutions

- Strengthen the Institutional arrangement
- Encourage coordinated activities with other authorities like of energy, standards.

Standards

- Regular do consultation on safety standards
- Organize Workshop on standard
- Support national, regional and international level efforts



The Implications

Re-oriented market/industry to make fast phasedown of HFCs than required in some sectors;

Synchronized policy, standard, programme, project, activity to cover both refrigerant and energy efficiency;

Improved infrastructure of the servicing sector: technicians, tools, management; and

Coordinated HCFC phase out and HFC phase down: avoid double conversion, especially the industrial process refrigeration.



Actions of R/AC Industry

R/D

- Review alternative options with GWP, energy etc
- Alternative technologies: industrial processing refrigeration, split air conditioner for high ambient temperature region
- Reduce refrigerant charging size
- Improve energy efficiency
- System tightness
- Safety related
- ...

After market

- Take new responsibility on installation, maintenance and servicing, even disposal of equipment;
- Linked to the performance and the
- Training of technicians
- Support the Refrigerant Driving License (RDL)
- ...

Support Government to take actions

- Standard, including country without OEM, Building code
- The management of the servicing sector, including technician training
- Synchronized programme, policy such as Green procurement, Green Building initiative, etc
- ...



Actions of UN Environment

Promotion of Ozone2Climate Technologies

- Ozone2Climate technologies roadshow and roundtable
- Publications
- Network meetings

Assist countries to improve the infrastructure of the servicing sector

- Good Practices: extend to cover installation, energy efficiency, safety
- Standards
- Certificate for technicians
- Vocational training system
- Sector management

Promote the use of the Ozone2Climate Technologies R/AC equipment

- Government procurement policy
- End-user awareness
- Labeling programme



Examples of Use Nature Refrigerants in Southeast Asia, and related Activities of UN Environment

Vietnam converted four cold stores from R22 to R290 with power saving of about 20-25%

In Thailand, one company has been using ammonia as refrigerant for cold storage and food processing plant with well established ammonia management system

One equipment manufacturer in Thailand, used to produce CO2 based Coolers, and is using R290 for commercial refrigerator manufacture.

UN Environment under China Trust Fund organized regional meeting for A/P and site visits on R290 room air conditioner/compressor production lines in Shenzhen, China for better understanding of R290 technology and getting ready for the adoption; a Guidebook is being finalized on R290 room air conditioner

Trainer workshop were organized for Cambodia on R290 room air conditioner in China in April 2017

More examples





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Thank you very much!

