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# HVAC&R industry in Indonesia and Kigali Agreement

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**HCFC PHASE-OUT AND HFC PHASE DOWN :  
CHALLENGES IN INDONESIA**

## OUTLINE

1. HVACR Industry in Indonesia
2. Challenges met during HPMP Implementation for Medium & High Capacity Units
3. Overall situation of Natural Refrigerants in Indonesia
4. Phase-down schedule for HFC in Indonesia
5. Preliminary thinking on the HFC Phase-down Strategy in Indonesia

# HVACR INDUSTRY IN INDONESIA

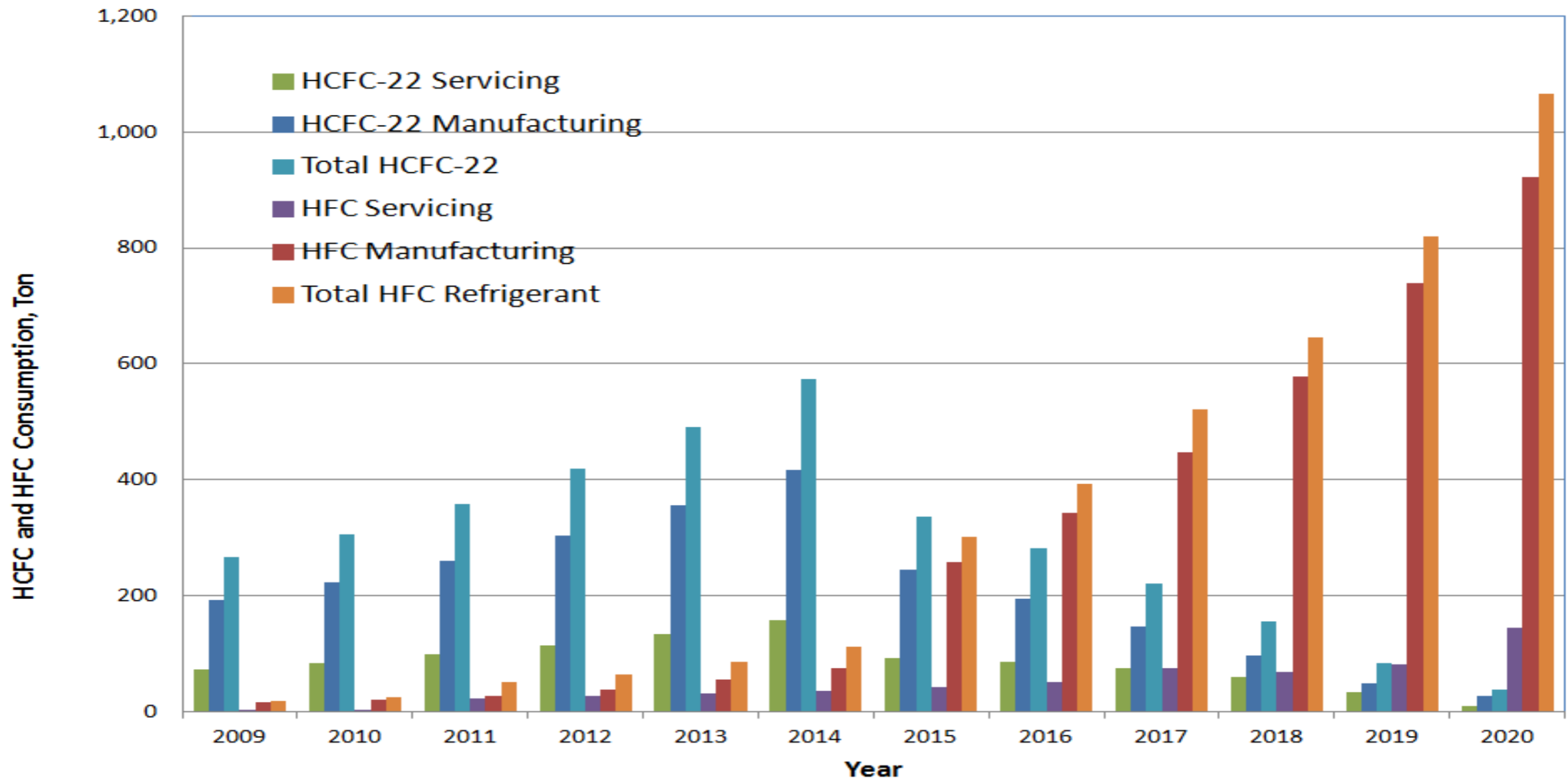


Figure 1. Annual HCFC and HFC refrigerant consumption in Manufacturing and Servicing of Commercial and Industrial Refrigeration Sector

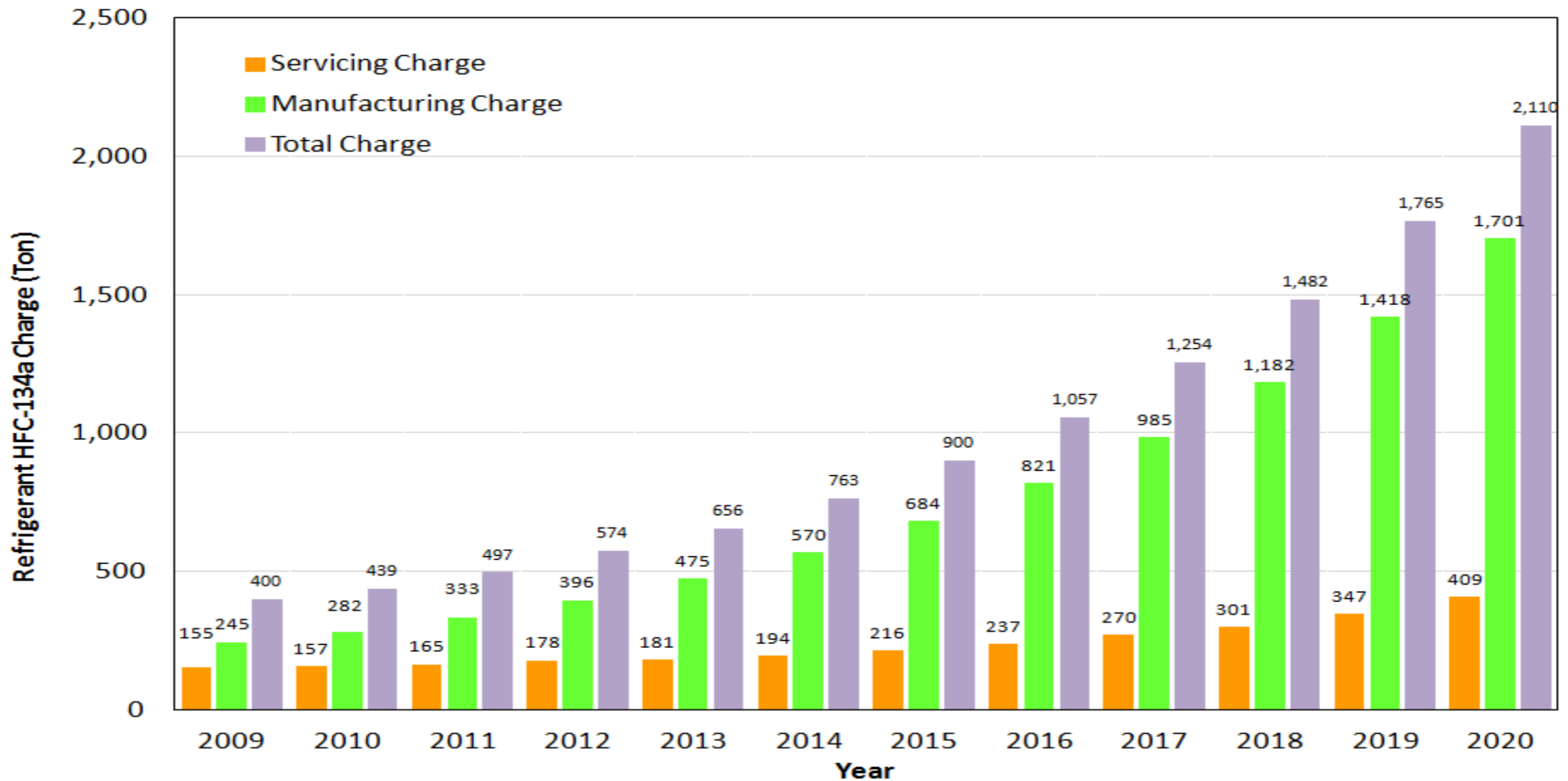


Figure 2. Annual refrigerant consumption (HFC-134a) in Domestic Refrigeration Sector

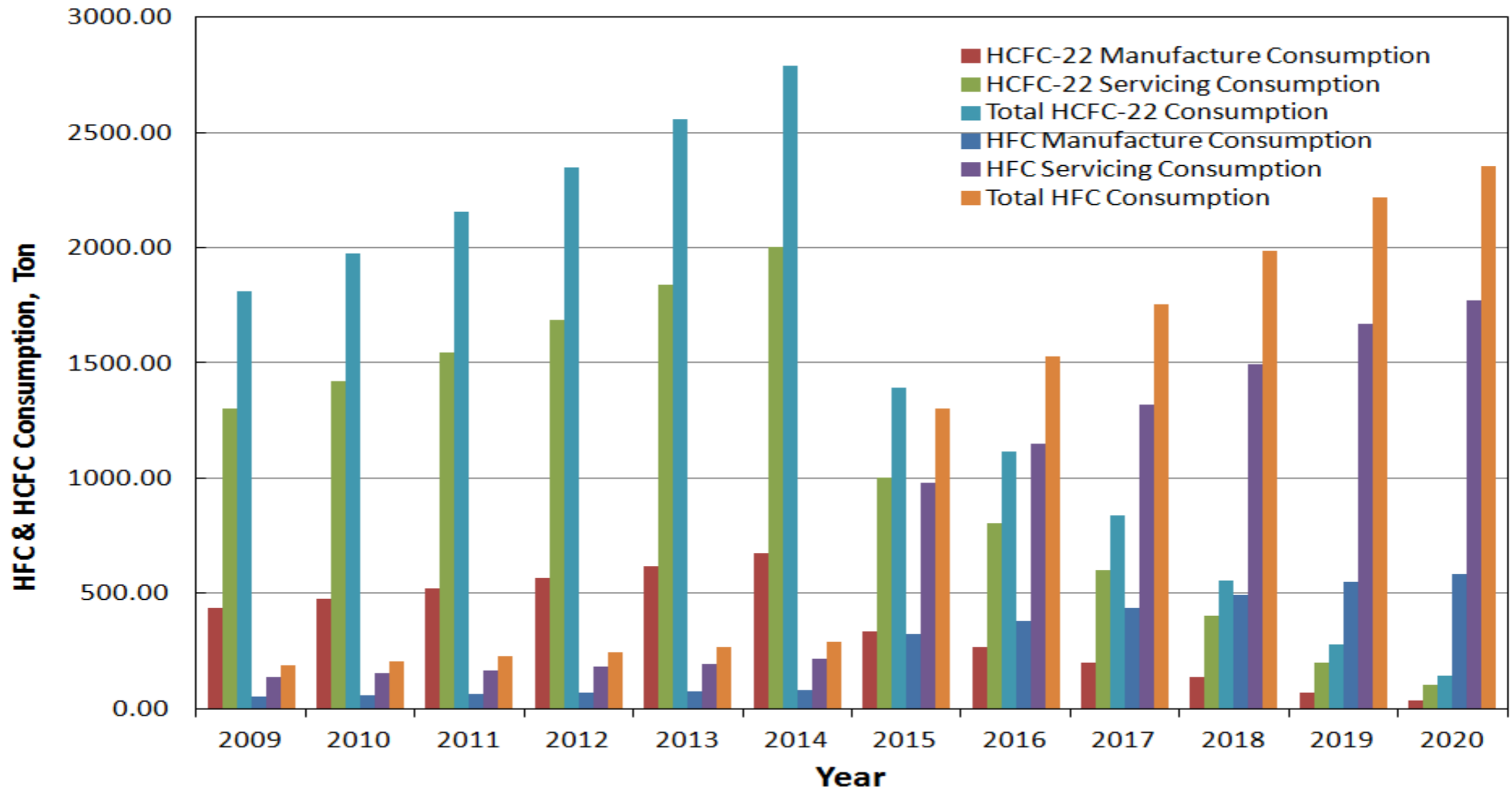


Figure 3. HCFC and HFCs consumption in manufacturing and servicing of Commercial and Residential AC Sector

## CHALLENGES MET DURING HPMP IMPLEMENTATION FOR MEDIUM AND HIGH CAPACITY UNITS

- The alternative technology that was proposed during negotiations were not easily adoptable by the market due to market competition from high GWP technologies
- Difficulties in sourcing components/input materials mainly because these technologies were relatively new.
- Business continuity of enterprises in certain cases would have been adversely affected and hence, only a few enterprises participated
- Regulatory and market constraints – two primary factors that affected industry conversion costs

## OVERALL SITUATION OF NATURAL REFRIGERANTS IN INDONESIA

- At this time, there is no data available in record of natural refrigerants use commercially in Indonesia, however for some pilot projects have been carried out by Alfamidi Convenience Store :
  - Transition from HCFC-22 to CO<sub>2</sub> system, featuring glass chiller, open chiller showcase, display cooler (glass door), island freezer and freezer. The pilot project including training for installer and maintenance engineers; study on laws and technical standards; safety and durability evaluation and installation.
  - There are 12 stores funded from this project, supported with energy saving equipment installation.
- The government will support for further demo projects of using various natural refrigerants if there are any potential sources of funds provided.



# PHASE-DOWN SCHEDULE FOR HFCS IN ARTICLE 5 PARTIES (GROUP1)

**Base year:** 2020-2022

**Baseline:** Average HFC consumption for 2020- 2022 + 65% of HCFC baseline

## Phase-down schedule:

2024:	Freeze
2029:	10%
2035:	30%
2040:	50%
2045:	80%

About 10 years grace period on baseline and phase-down schedule comparing to main developed countries

Applicable to A5 countries of Group 1

# PRELIMINARY THINKING ON THE HFCS PHASE-DOWN STRATEGY IN INDONESIA

- Establishing licensing system on HFCs before 2020 to get better data of HFCs in the baseline year
- Prioritizing the phase-down of HFCs in products with mature alternatives, conducting pilot project ASAP in below sectors:
  - Domestic Refrigeration
  - Aerosol
  - Stand-alone Commercial Refrigeration
- Introducing import control measures to high GWP HFC-based Room ACs in due time. (after 2022?)
- Introducing low GWP alternative in MAC sectors at later stage according to the alternative availability and affordability
- Strengthening the safety training to the manufacturers and technicians



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Thank you very much!

