



New Policy Measures for Reducing F-Gas Emissions in Japan

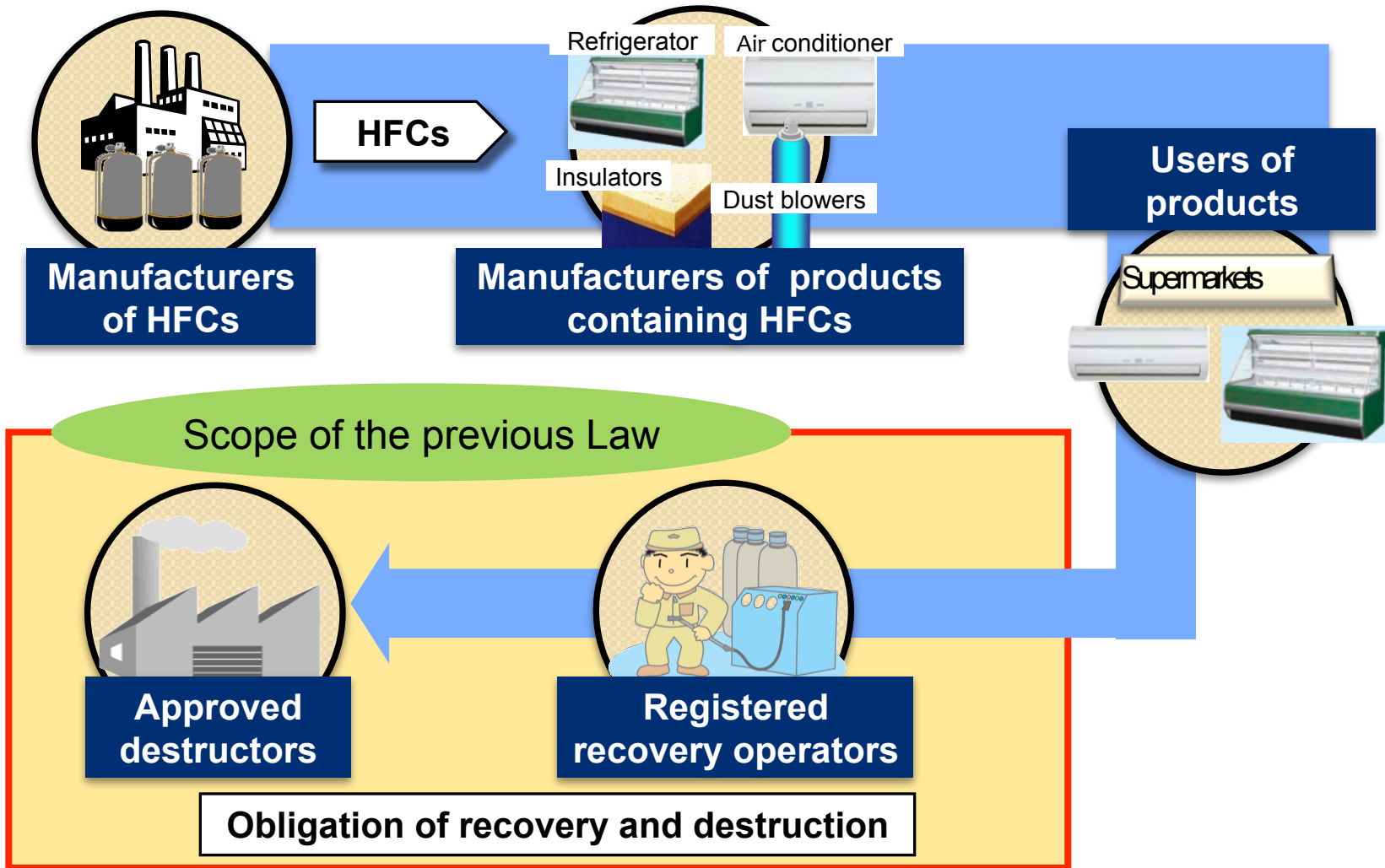
Outline of the Amendment of Japan's
Fluorocarbons Recovery and Destruction Law

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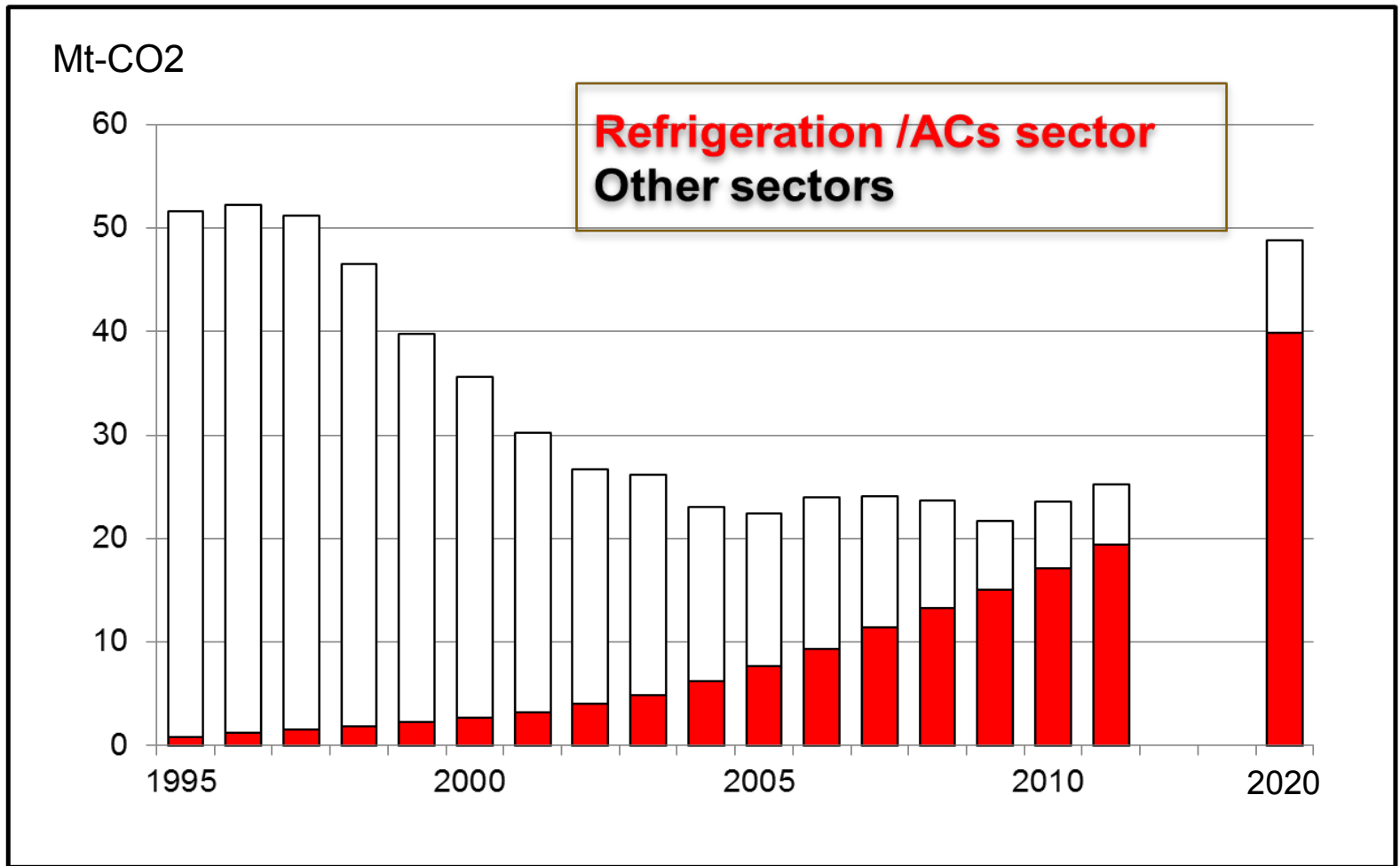
Coverage of the Previous Law



Newly Identified Concerns

- Rapid increase of HFCs emission
 - Will be doubled in 2020
- Significant leakage in use
 - From refrigerators and air conditioners
- Low rate of recovery
 - Recovery rate of used refrigerants remains around 30%

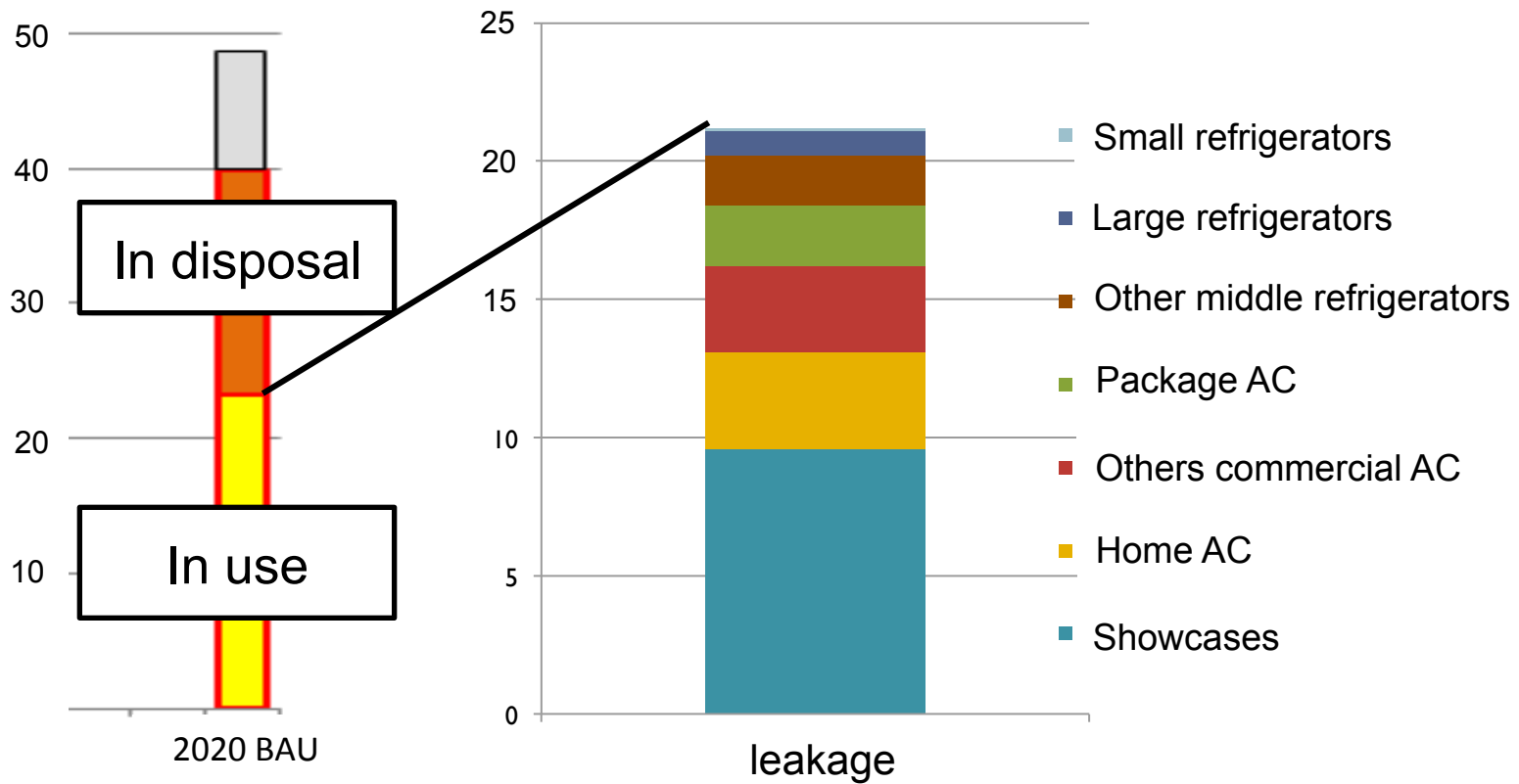
Increasing HFCs Emission (BAU)



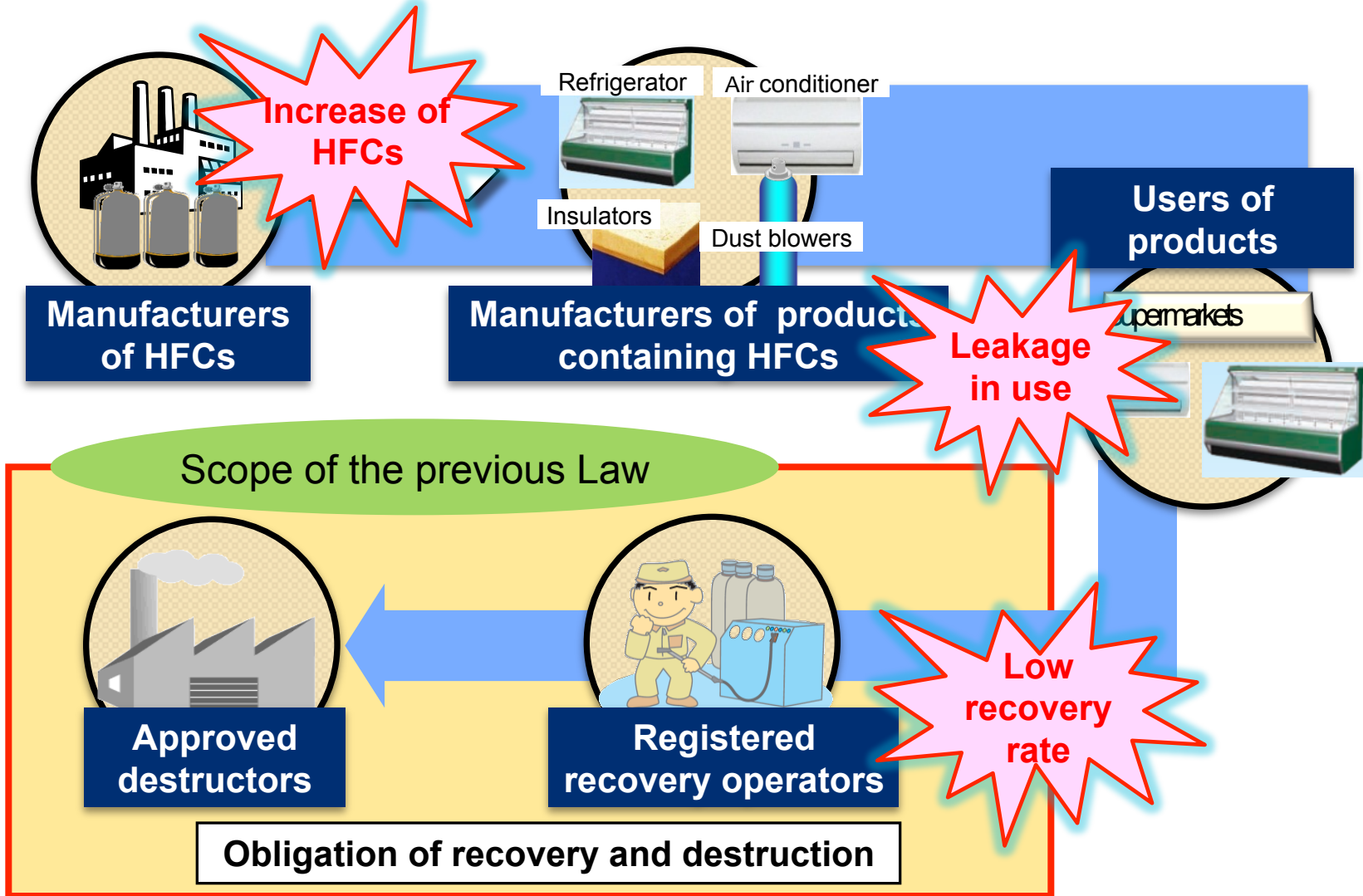
Estimated by Ministry of Economy, Trade and Industry of Japan

Emission of HFCs in 2020 (BAU)

(mil t-CO₂)

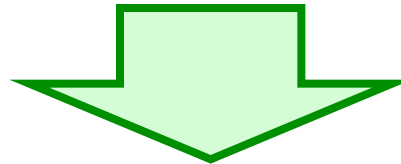


Need to Cover These Issues



Major Points of the Revision

- Prevent leakage from commercial equipment in use
- Promote low GWP equipment and products
- Phase-down fluorinated gases in GWP basis



Change over the trend of HFCs emissions from increase to decrease as soon as possible

Prevent Leakage from Commercial Equipment in Use

End users of commercial refrigerators and air conditioners are required to manage such equipment properly during its use.

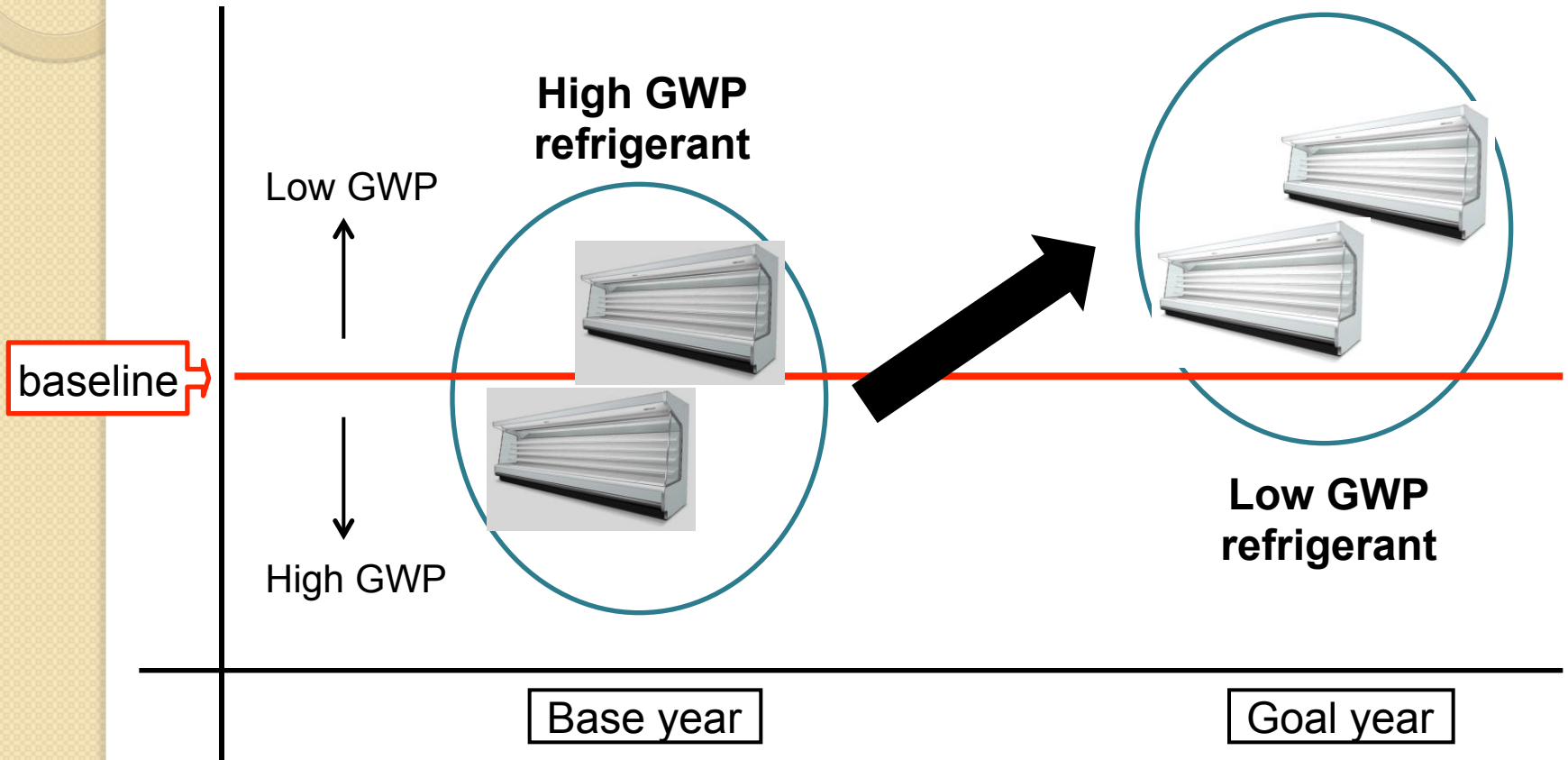
- Raise commercial user's management level of equipment by setting a standard
- Users – check leakage from equipment, report it to the Government when the amount of escape exceeds certain criteria
- Government – publish the report submitted by users

Promote Low GWP Equipment and Products

Manufacturers and importers of equipment and products (e.g. air conditioners) are required to introduce new equipment and products into the market, which use low GWP or non-fluorinated gases.

- Replace high GWP products in the market with low GWP or non F-gas alternatives
- Assess achievement (in weighted average) by product category using baseline criteria
- Consider safety, energy efficiency and cost

Achieve Baseline by Product Category

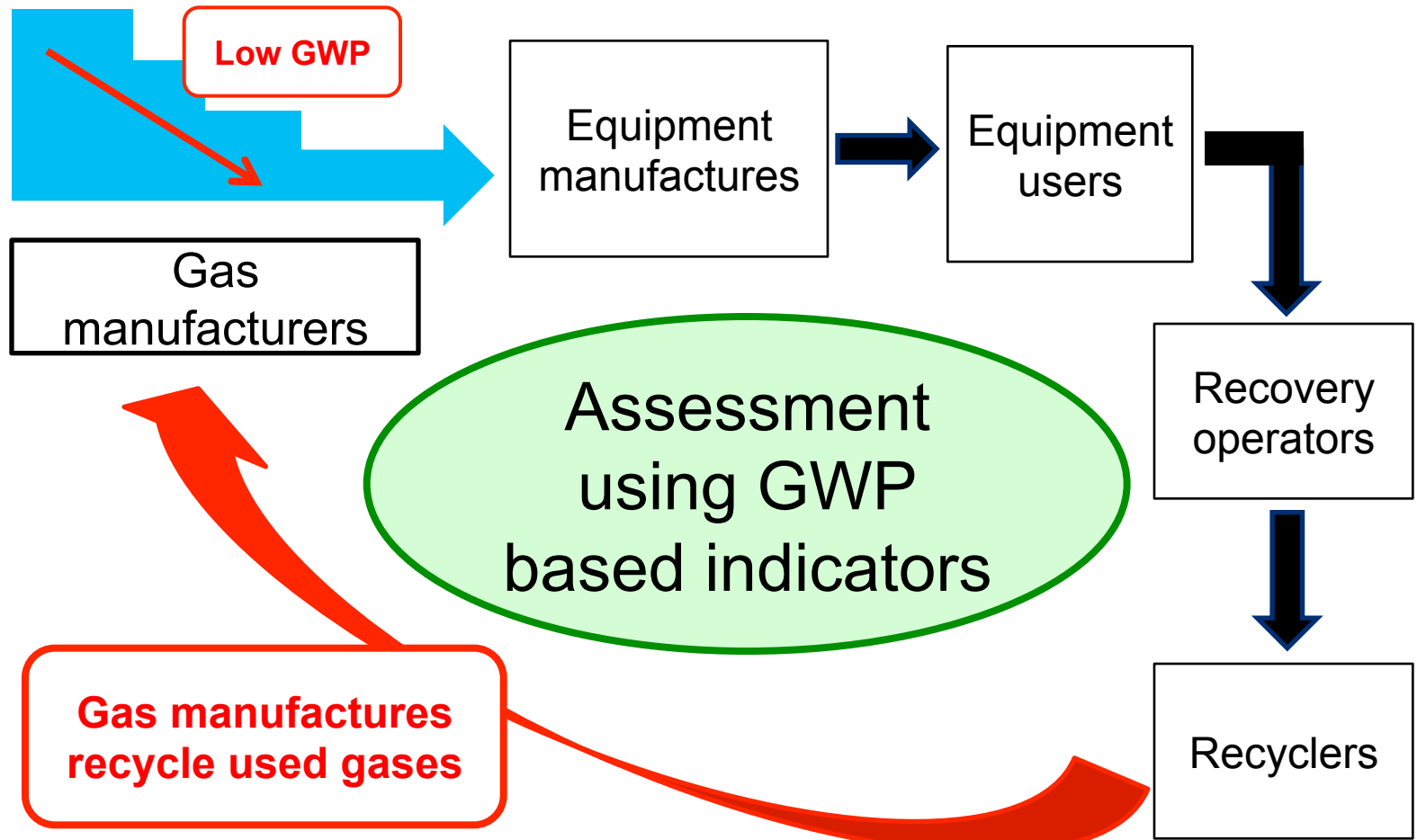


Phase-down Fluorinated Gases

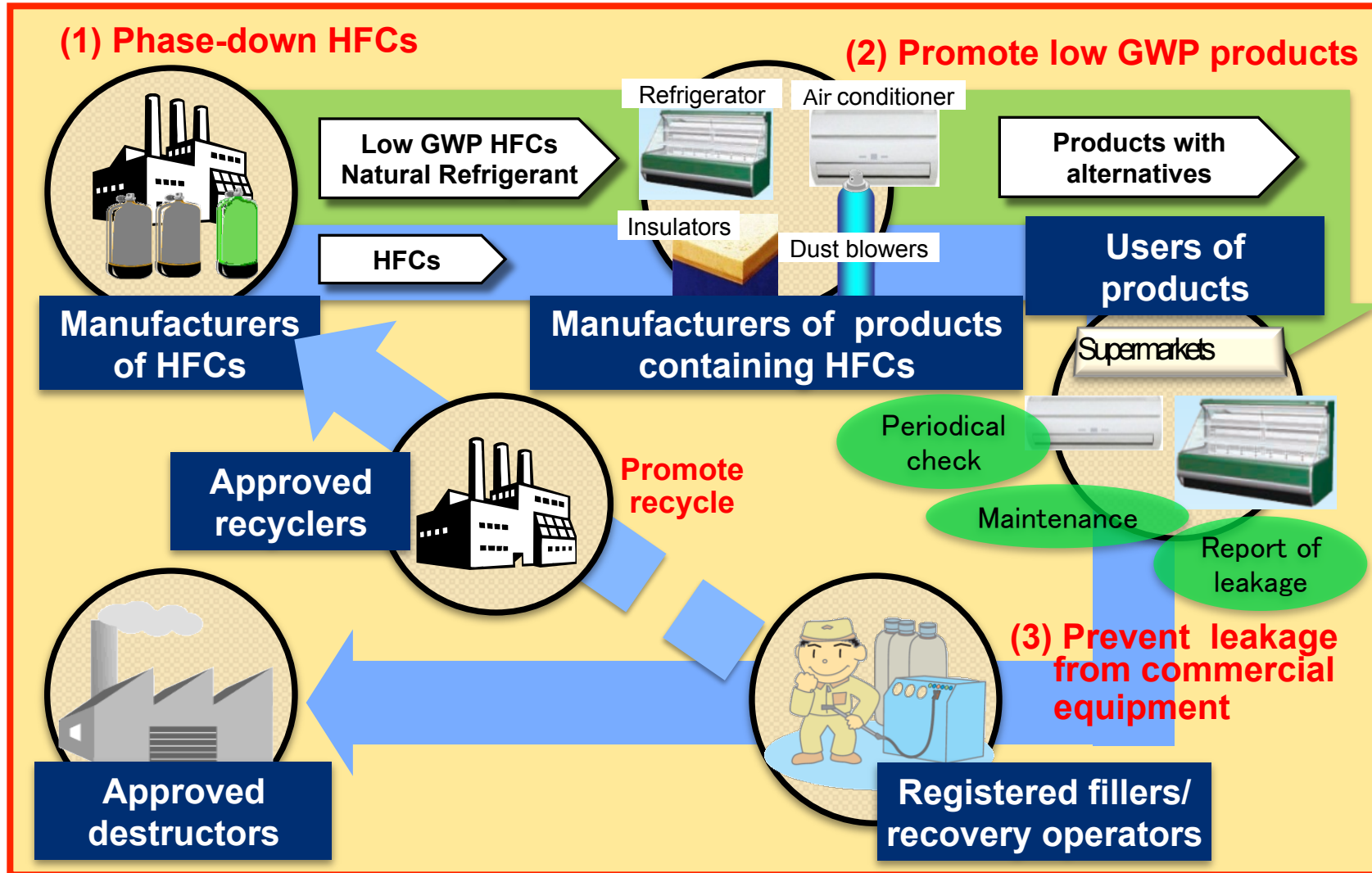
Manufacturers and importers of fluorinated gases are required to substantive (in GWP equivalent) phase down of fluorinated gases for reducing their environmental emissions.

- Several approaches to be taken
 - Develop and produce lower GWP gases
 - Replace virgin gases with recycled gases
- Scheduled reduction based on the indicator set by the Government

Achievement Assessed at GWP Base Reduction



Revised Law Covers All Lifecycle



Expected Effects of the Law on Reduction of HFC Emission

(unit = 10,000t CO₂)

Year	BAU	Promote low GWP equipment and products	Prevent leakage from commercial equipment	Total reduction
2010	1,713			
2020	4,020	▲ 390 ~ 660	▲ 530 ~ 950	▲ 970 ~ 1,560
2030	4,810	▲ 2,210 ~ 2,730	▲ 270 ~ 560	▲ 2,550 ~ 3,180

Source: Preliminary calculation by the Council of METI and MOE

* To be revised along with the detailed operating measures to be developed for enforcing the revised law

Further Action Plan

- The law shall be enforced in 2 years (become effective in 2015).
- The detailed operating measures will be prepared as a governmental and ministerial ordinance.
- Each target for the reduction level will be determined according to the circumstances of related sectors.



Thank you