

# HFC Management by leakage reduction and recovery, and next actions for stepping forward.

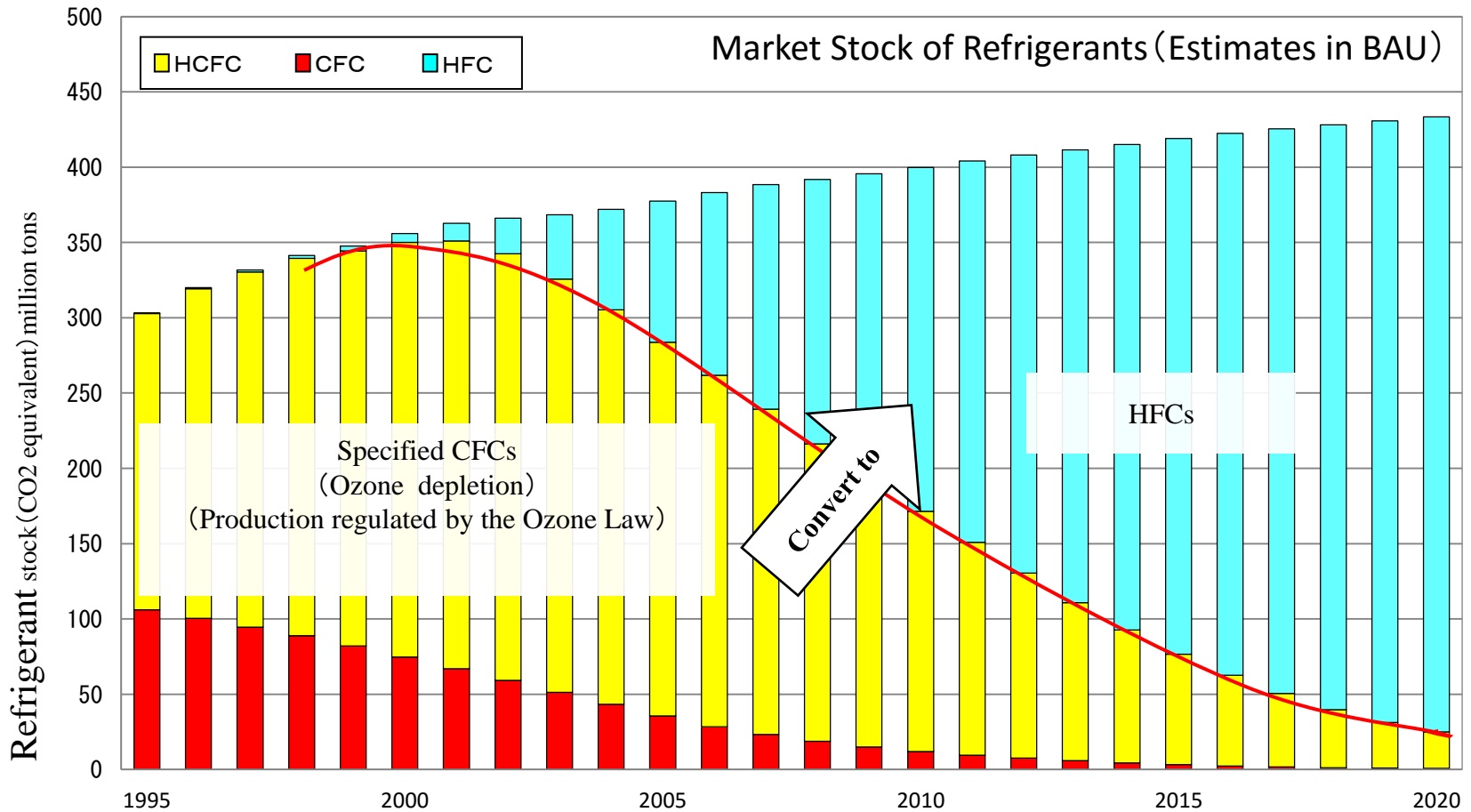
**Workshop on HFC Management  
in Bangkok  
(20th Apr 2015)**

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Conditioning Industry Associations  
(JRAIA)**

# 1. Refrigerant stock in Japan

- Future Possibility of HFCs Emissions (increasing rapidly)

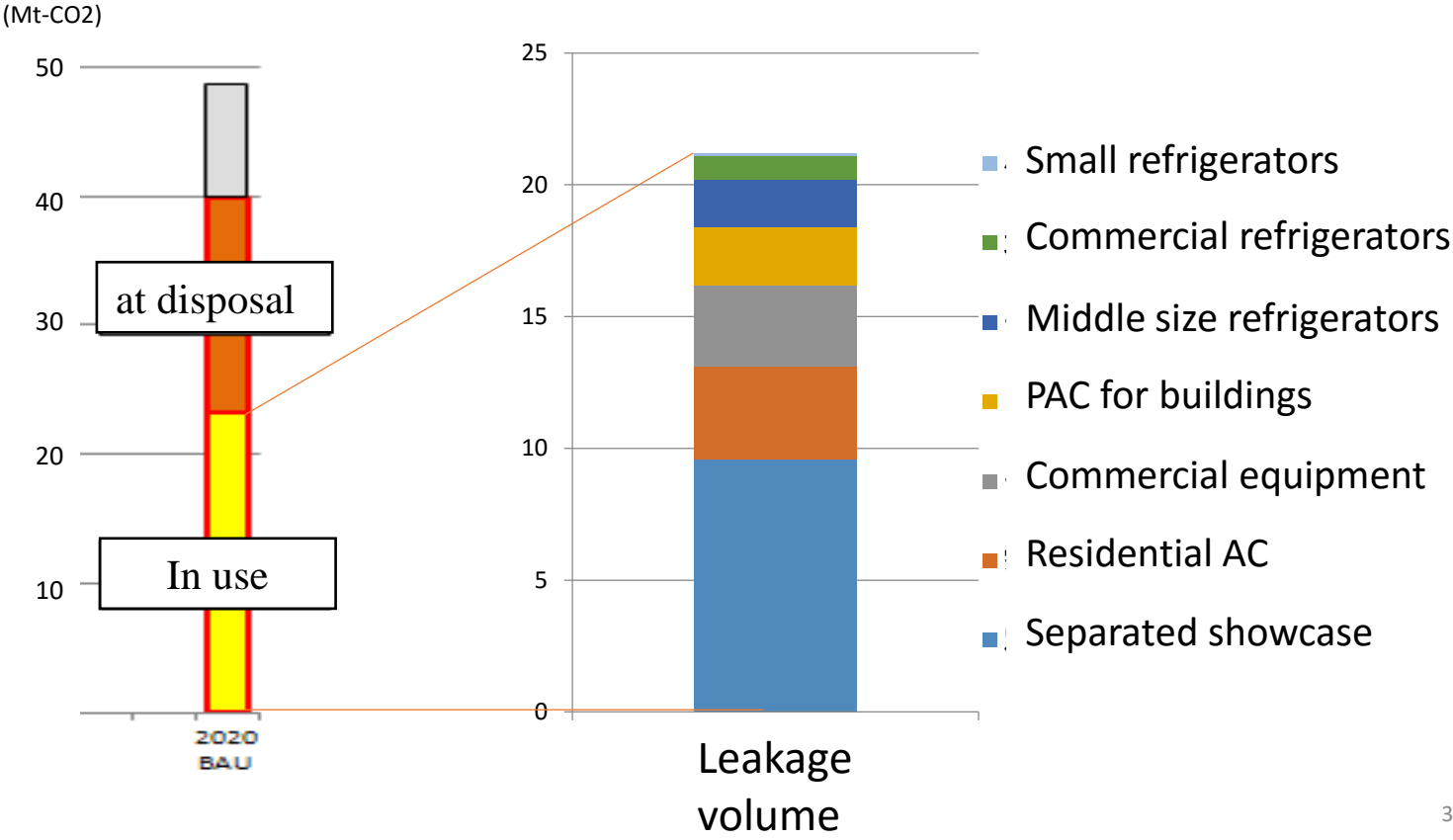


Source: METI

BAU: Business As Usual

# 2. Estimate of emissions in the market.

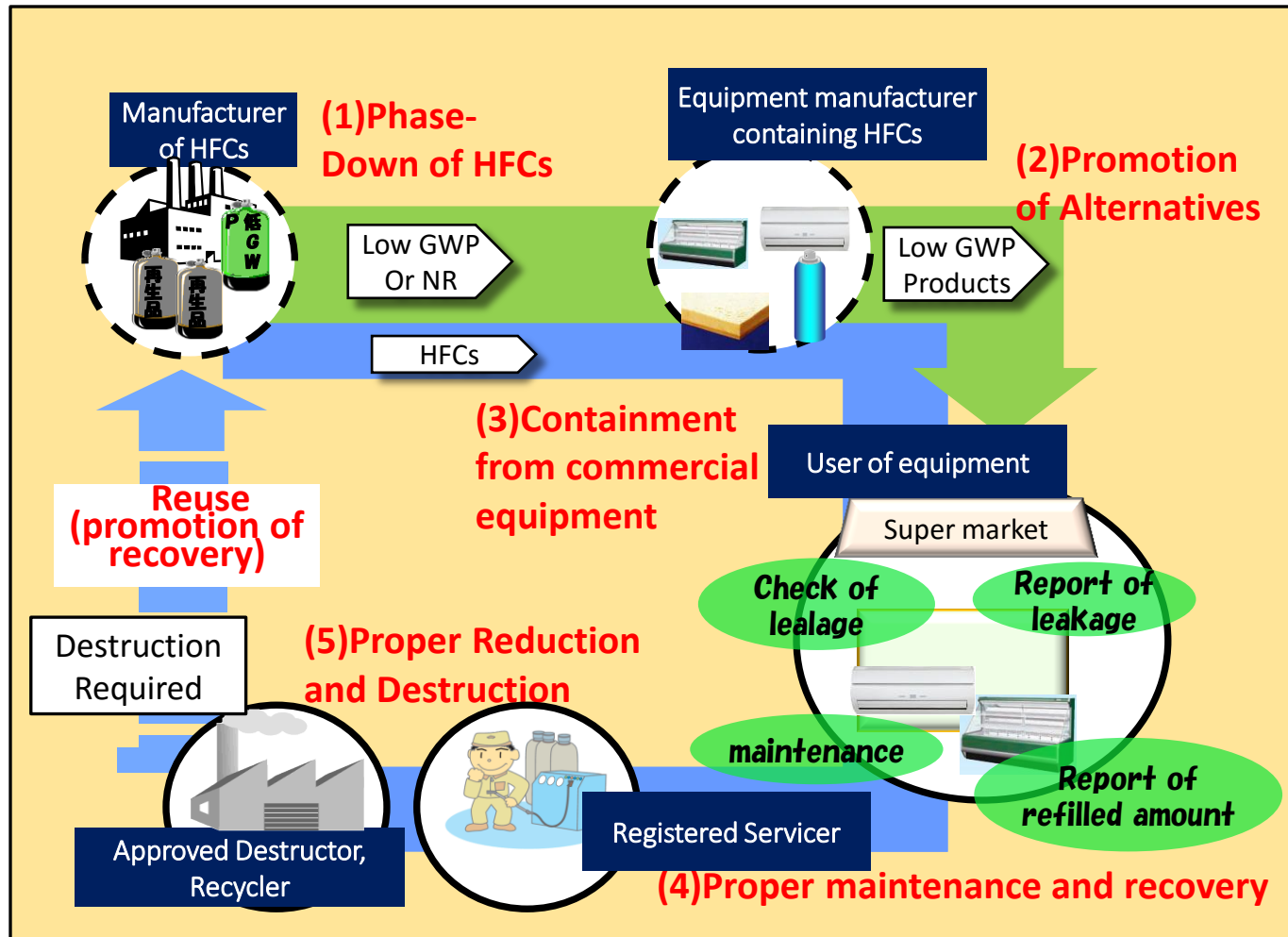
- One of the biggest issues is leakage from equipment.
- Leakage of both at disposal and in use are more than 80%.



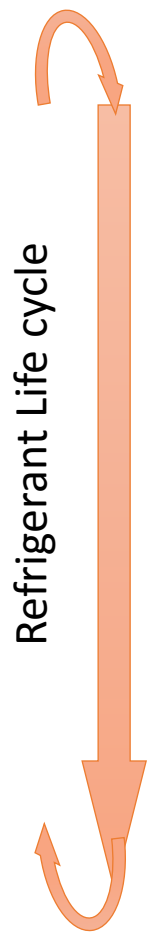
CFC's substitutes covered by the Kyoto Protocol in 2020 (BAU) and breakdown by equipment in use

# 3-1. Scope of “Act on Rational Use & Proper Management of Fluorocarbons”

- To address issues throughout the lifecycle of fluorocarbons



## 3-2. Scope(2)



Who	What to do
Refrigerant Manufacturer, Importer	To decrease the amount of ref. To report the results
Equipment Manufacturer, Importer	To develop the products to fit the target index of GWP till the target year
User	To check own equipment and to keep the data of the results
Installer, maintenance person	To get the certification, to report the record of the amount of the leakage of refrigerant
Destructor, recycler	To get the approval

## 4. For manufacturers and importers of HFCs

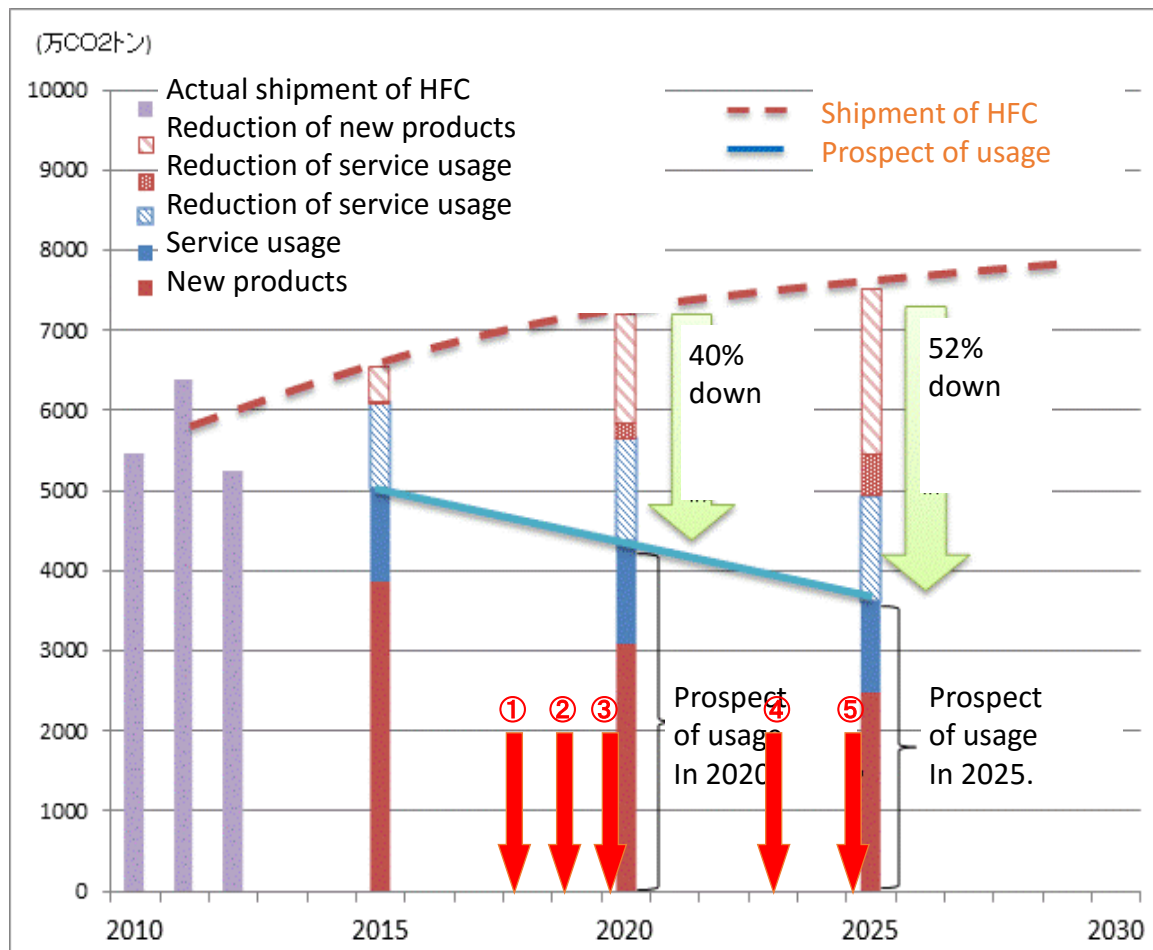
### <40% Reduction of HFCs use in 2020>

43 CO2 equivalent million tons

### <52% Reduction of HFCs use in 2025>

36 CO2 equivalent million tons

(BAU: Business As Usual )



## 5. Revised regulation for manufacturers and importers of equipment

Specified equipment category	Current refrigerant and its GWP	Target GWP (Weighted Ave. GWP)	Target year
Residential AC	R410A(2090), R32(675)	750	2018
AC for shops & offices<< <u>small size only</u> >>	R410A(2090)	750	2020
Automotive air conditioners*	R134a(1430)	150	2023
Condensing & Stationary refrigeration units*	R404A(3920), R410A(2090) R407C(1774), CO2(1)	1500	2025
Central refrigeration equipment*	R404A(3920), Ammonia	100	2019
Hard urethane foam	HFC-245fa(1030), HFC-365mfc(795)	100	2020
Dust blower	HFC-134a(1430), HFC-152a(124) CO2(1), DME(1)	10	2019

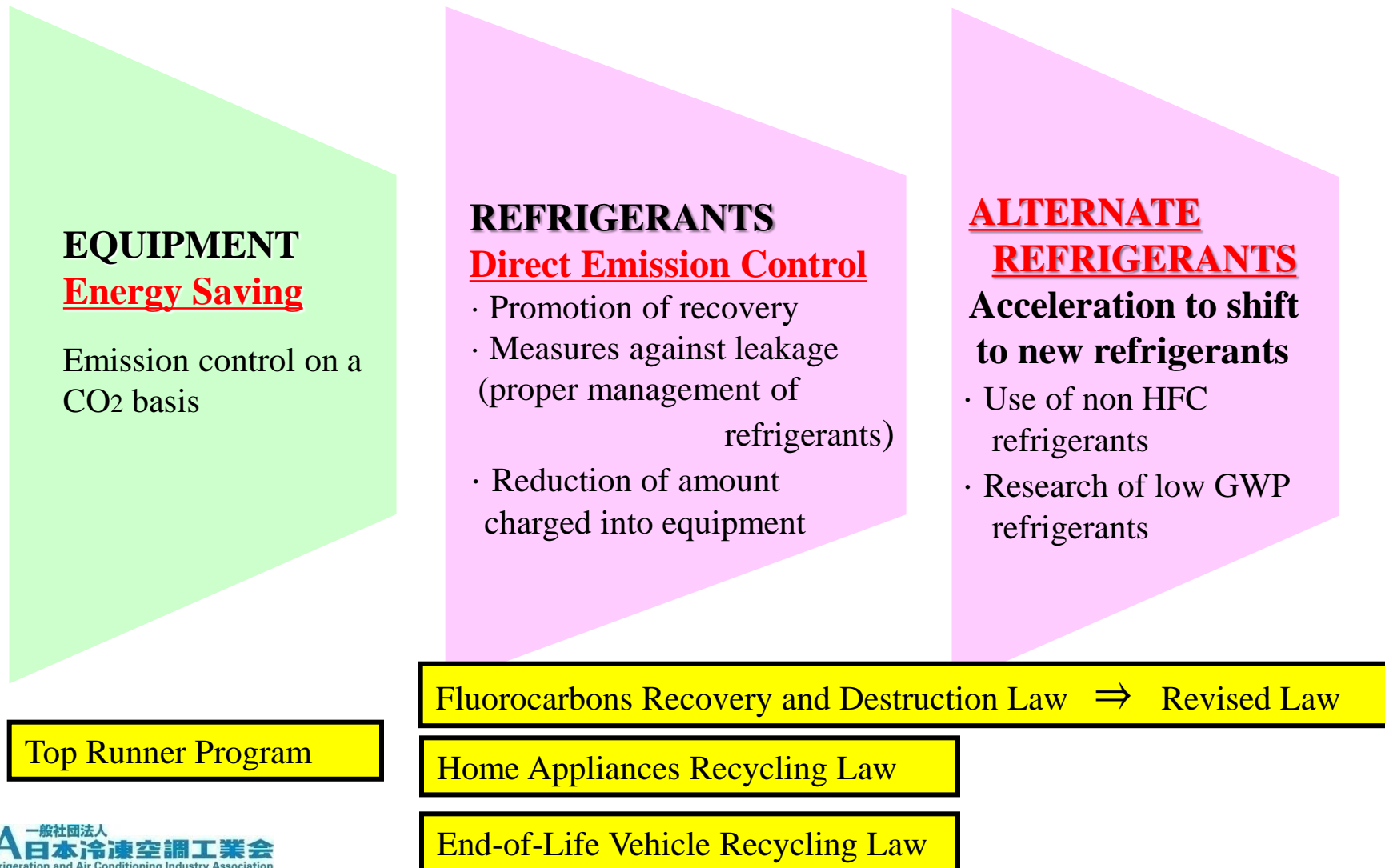
\* : with some conditions

## 6. Revised regulation for equipment owners( users of products)

	Check points	Frequency	By whom
<b>Simplified periodical check</b> <u>For All commercial equipment</u>	Noise, Leakage, Cabinet Temperature etc. ( Appearance check)	Every 3 months	No limitation
<b>Periodical check</b> <u>For large size equipment</u>	<b>Indirect method</b> ( measurement of pressure or temperature) or Combination of <b>direct</b> (leak check) and indirect method.	Every year or every 3 years	Certified person

## 7. JRAIA's Vision and Activities on Environmental Conservation

- JRAIA has 3 main pillars.
- Each pillar links the laws( yellow bars) related to each factors.





Thank you for your kind attention.