

New Policy Measures for Reducing Fluorocarbon Emission in Japan

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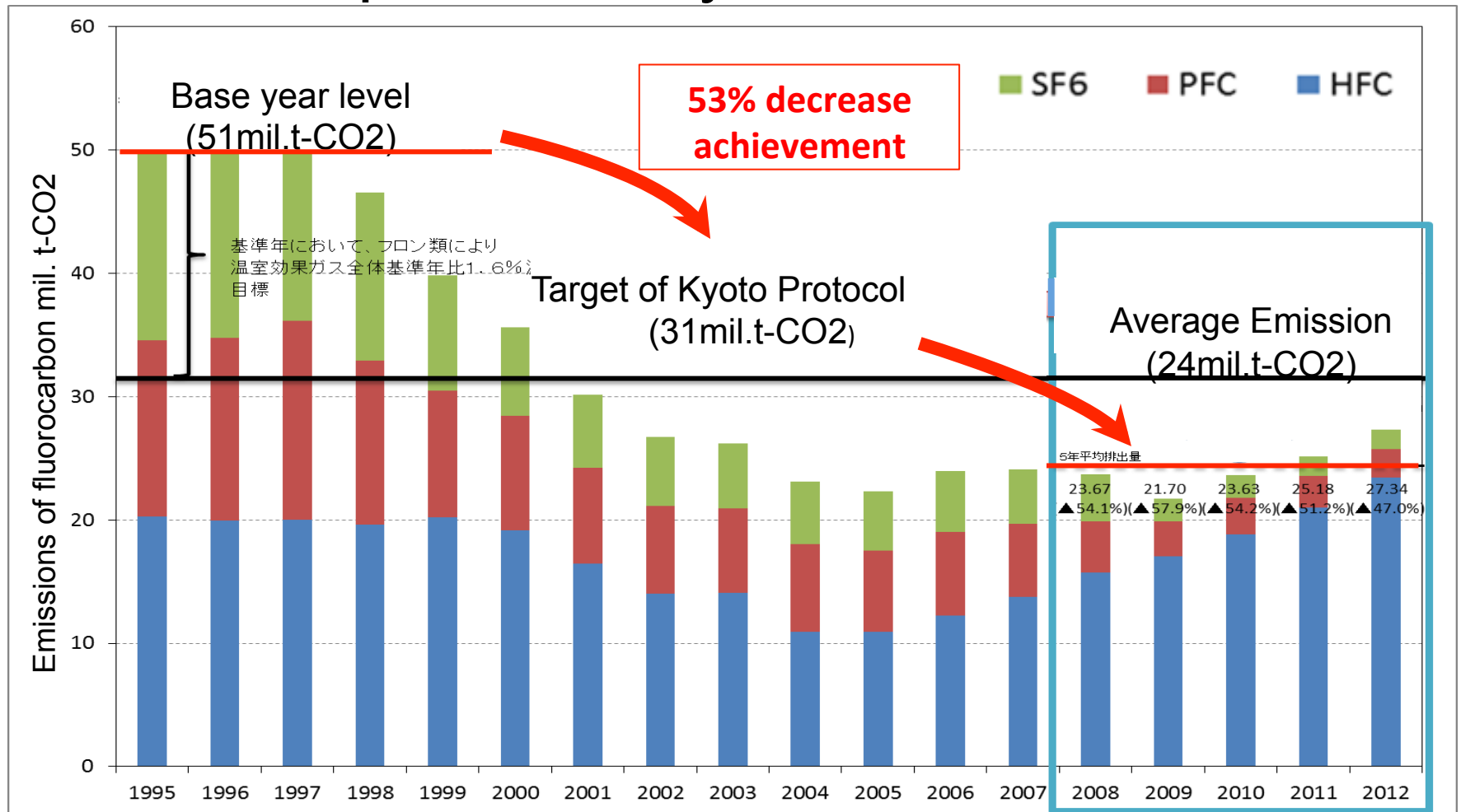
Fluoride Gases Management Office

Ministry of Economy, Trade and Industry, Japan

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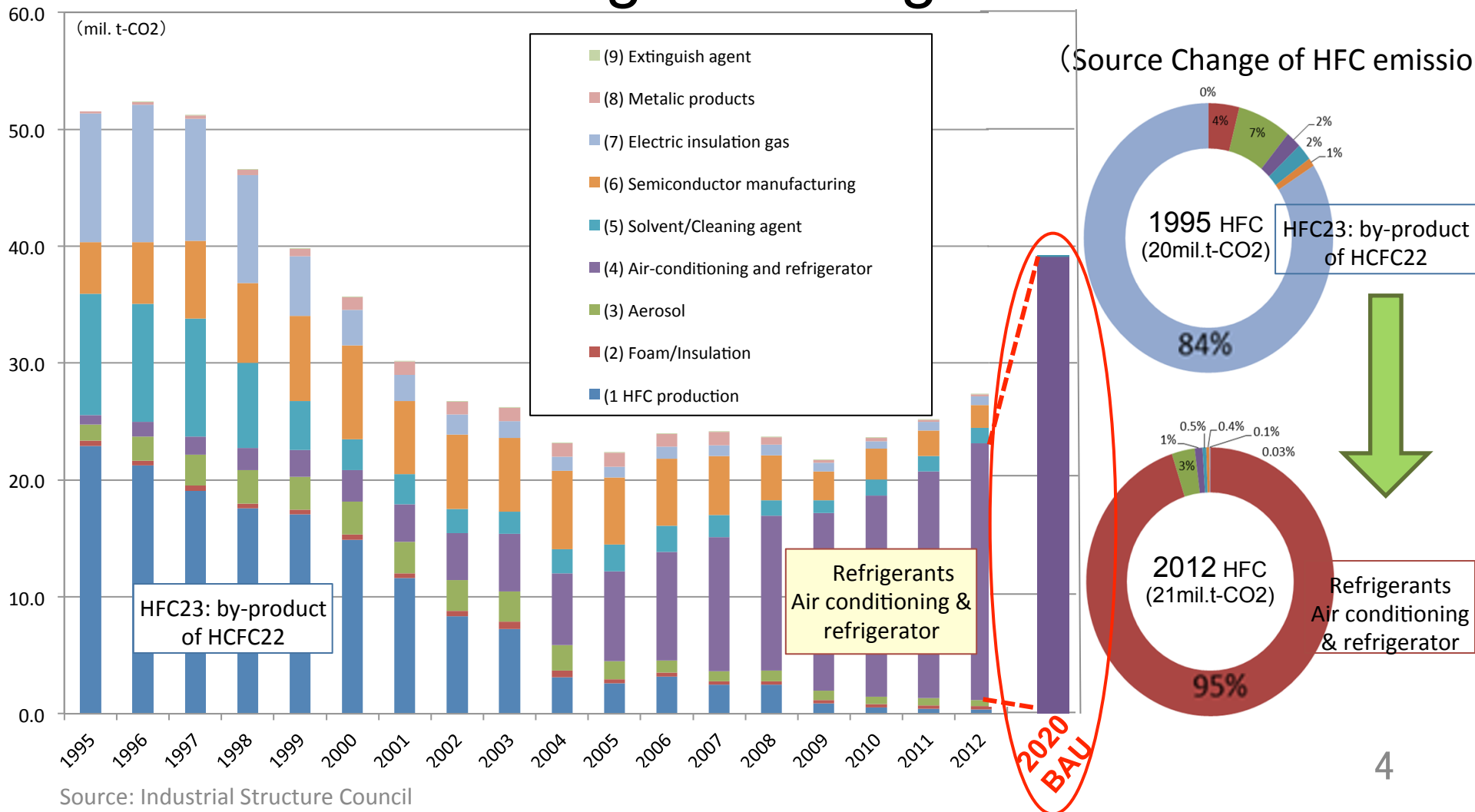
Status of emissions of HFC, PFC and SF6 (HCFC alternatives) reduction during the first commitment period of Kyoto Protocol



Status of emissions per sector

by Industrial Voluntary Action Plans

Prospective increase of Fluorocarbons emissions in Air-conditioning and refrigeration sector



Direction of the measures on fluorocarbons (HFCs)

Concerns

1. Prospective rapid increase of HFC emission

2. Significant leakage during operation

3. Low rate of recovery

4. Technical development and commercialization of low-GWP/non-fluorocarbon products

5. Global movement of strengthening the regulations on high-GWP fluorocarbons

Measures

Comprehensive measures required over the lifecycle from production of fluorocarbons to disposal in addition to recovery/disposal under current law

1. Promotion of low-GWP/non-fluorocarbon products or equipment (conversion by manufactures)

2. Phase-down of fluorocarbons (measures by gas makers)

3. Preventing leakage of fluorocarbons from commercial air-conditioning and refrigeration in use (management by users)

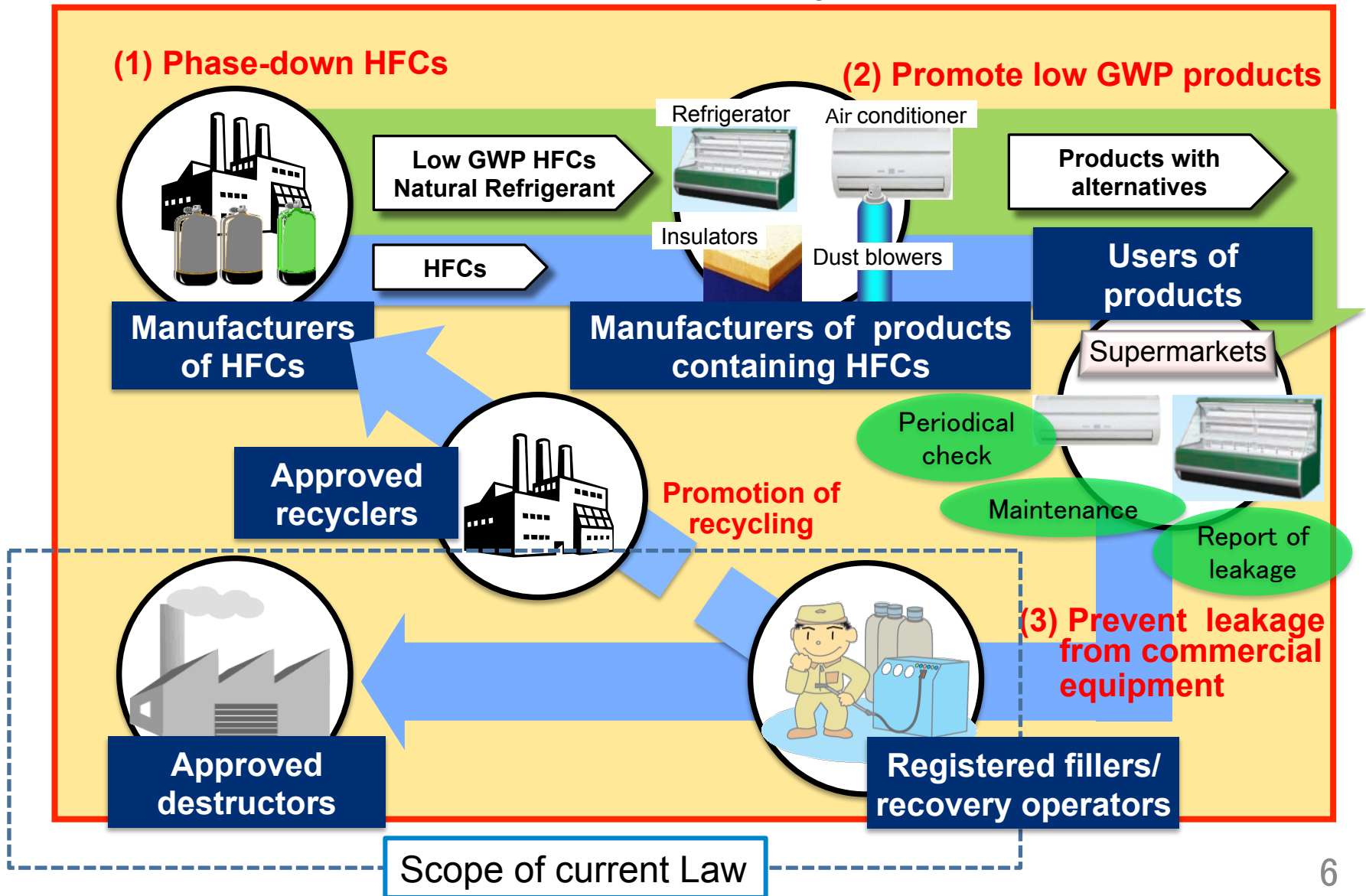
4. Filling by registered operators and recycling by licensed operators

etc.

Revised law promulgation (June 2013)

Revised Law Covers total Lifecycle

Planning to be effective from April 2015



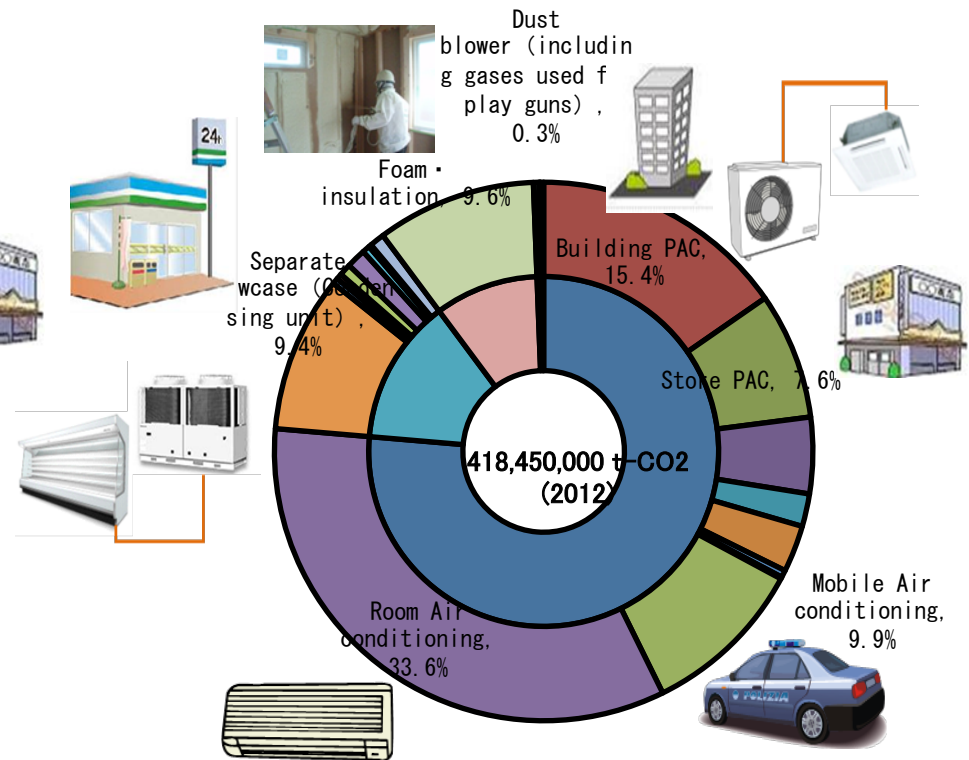
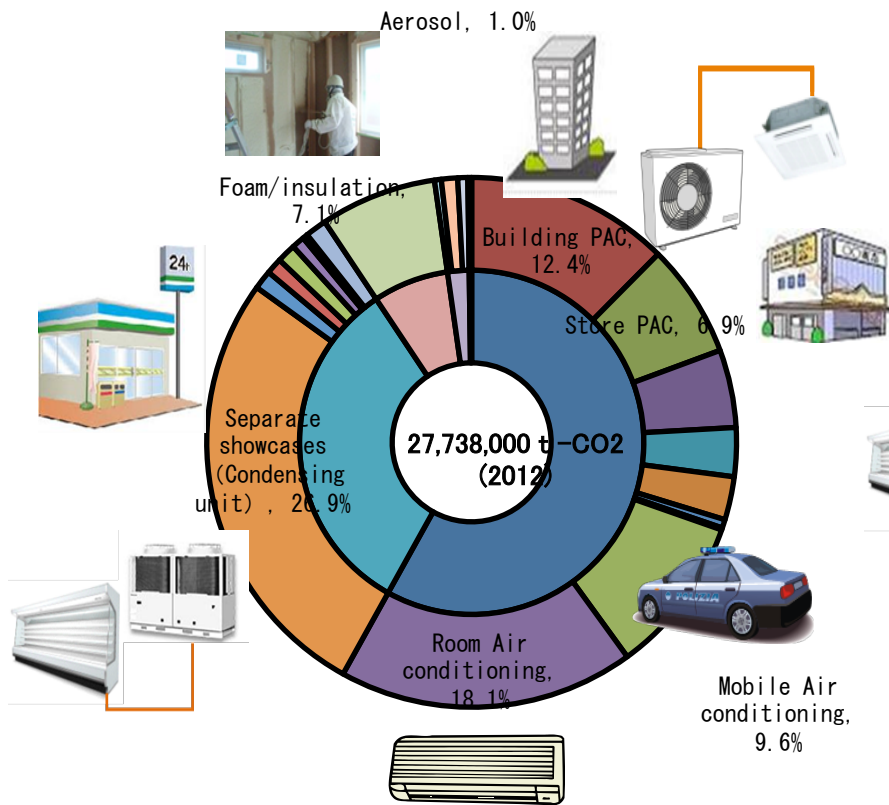
Possible target of designated products and equipment using fluorocarbons

(HFC emission)

(HFC stock amount)

Ratio of fluorocarbon emissions from whole products lifecycle including manufacturing, usage and destruction (2012)

Ratio of fluorocarbon amount used in products under operation (2012)



Source: inventory report of green house gases by METI

※Based on GWP values for the second commitment period - Kyoto Protocol

※Subject to change depending on considered categories of designated products.

Measures to promote low-GWP/ non-fluorocarbons in designated products and equipment

PLAN

Manufacturers and Importers of products and equipment will be required to replace high-GWP products with low-GWP or non-fluorocarbons for shipping, considering safety, energy efficiency, economic affordability etc.

Example) Air conditioning

Designated products

High-GWP

- Refrigerants GWP= A
- Refrigerant amount A kg
- Volume of shipment A

To reduce climate impact by converting to the lowest GWP among the designated products

- Refrigerants GWP \Rightarrow Low-GWP/non-fluorocarbon
- Refrigerant amount E kg
- Volume of shipment E unit

Target value

Evaluate accomplishments for each product category (weighted average)

- Refrigerants GWP \Rightarrow Low-GWP/non-fluorocarbon
- Refrigerant amount F kg
- Volume of shipment F unit

Low-GWP

Base year

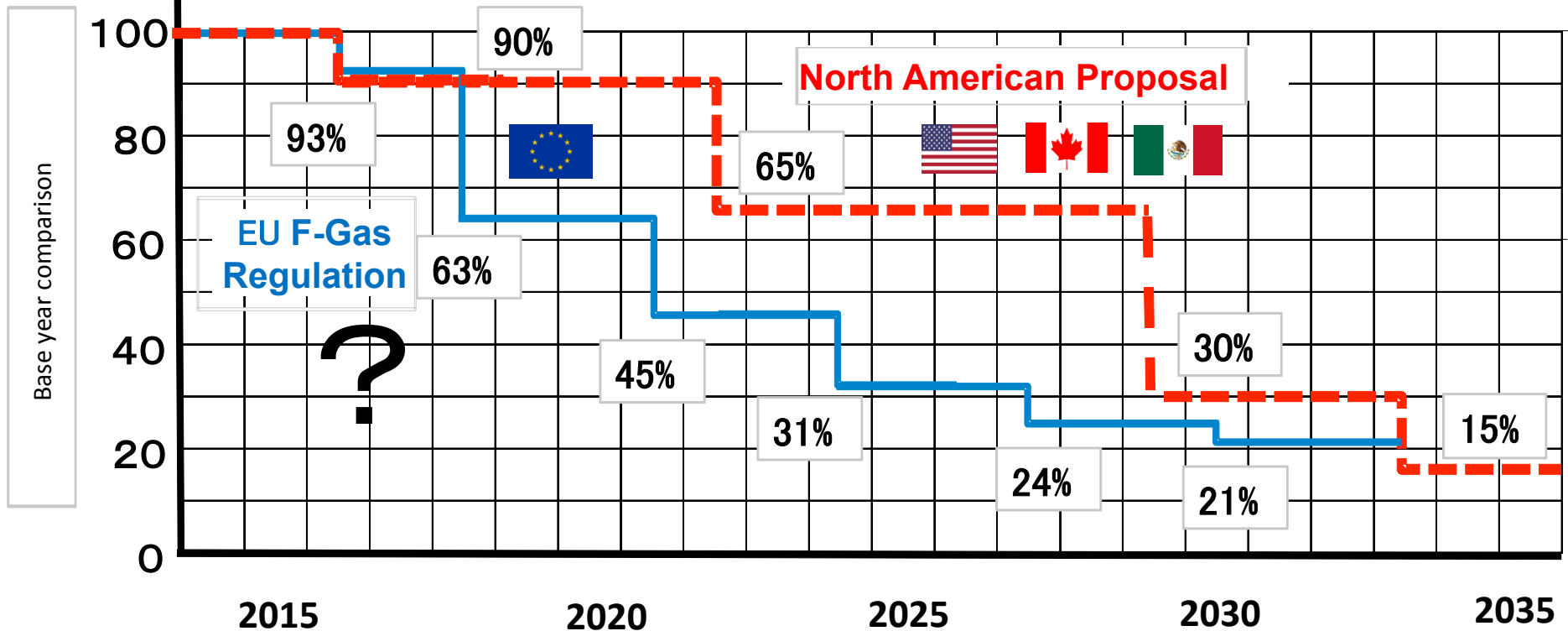
Target year

Index related to environmental impact

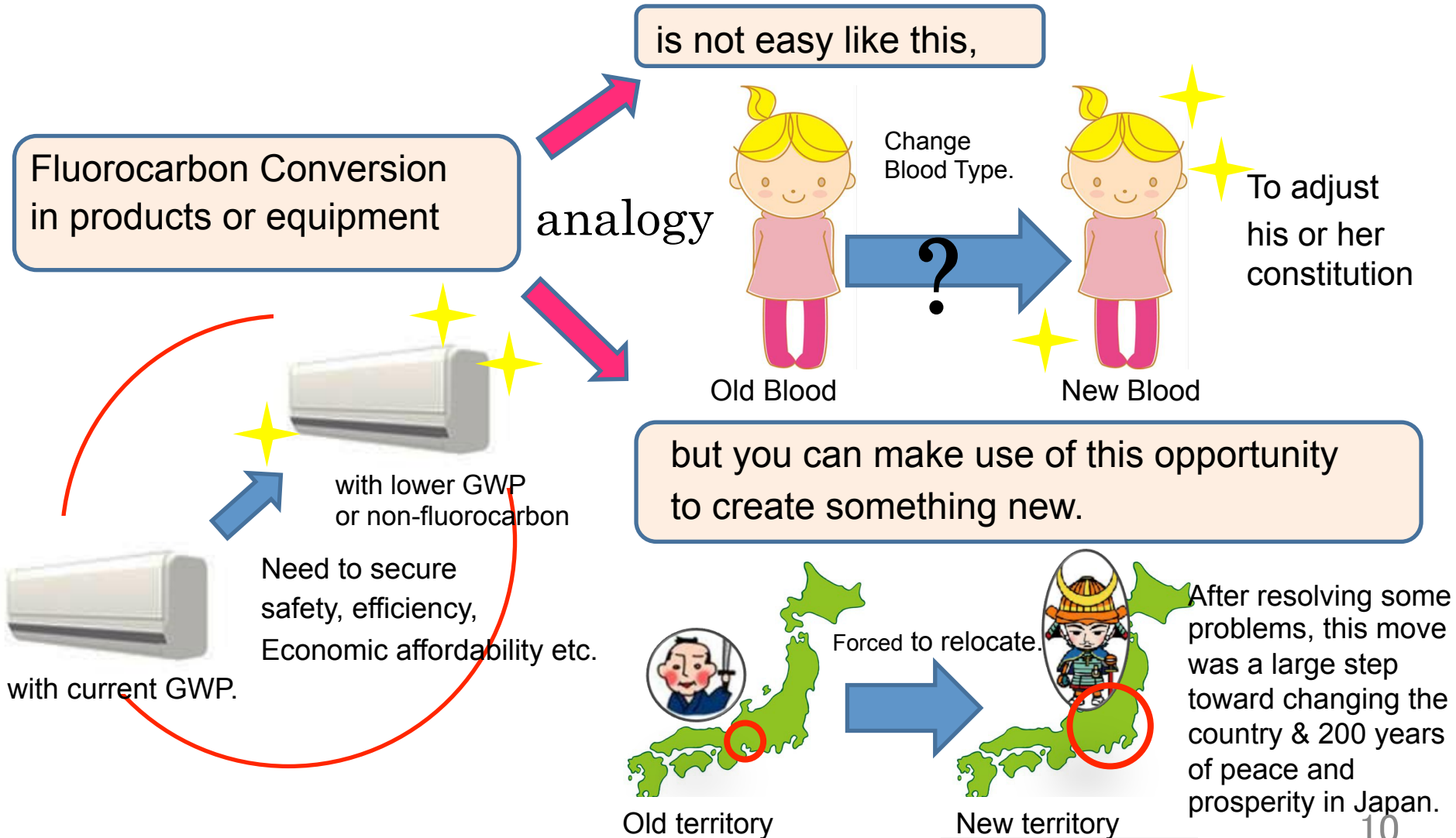
Image of measures to conduct HFCs phase-down

Manufacturers and Importers of fluorocarbon gases will be required to conduct “HFCs phase-down” with development and production of lower GWP gases

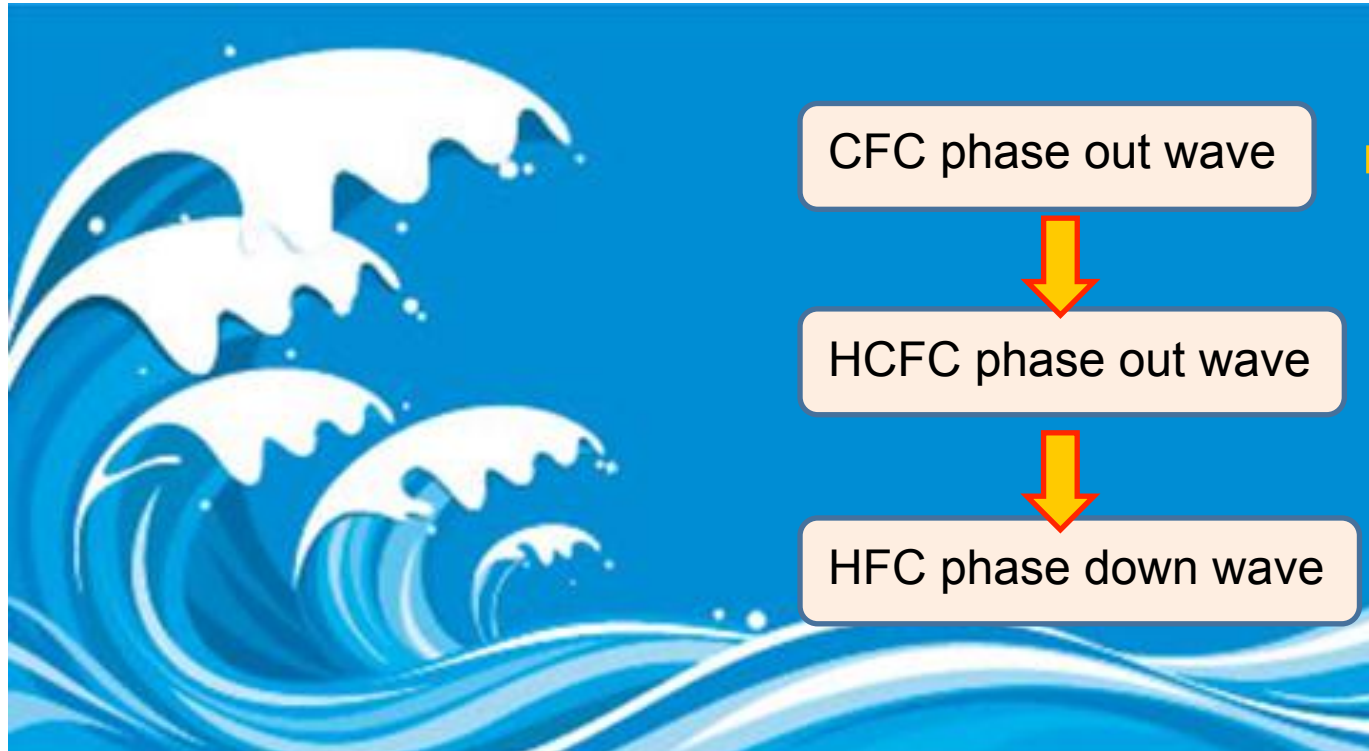
considering safety, energy efficiency, economic affordability etc.



Challenging indeed, but headache or opportunity ?



How can we get over this new wave? Or, How can we make our own waves?



CFC phase out wave

(Past)

over

HCFC phase out wave

(Now)

getting over

HFC phase down wave

(Future)

passive ? or proactive?

