

# New Policy Measures for Reducing Fluorocarbon Emission in Japan

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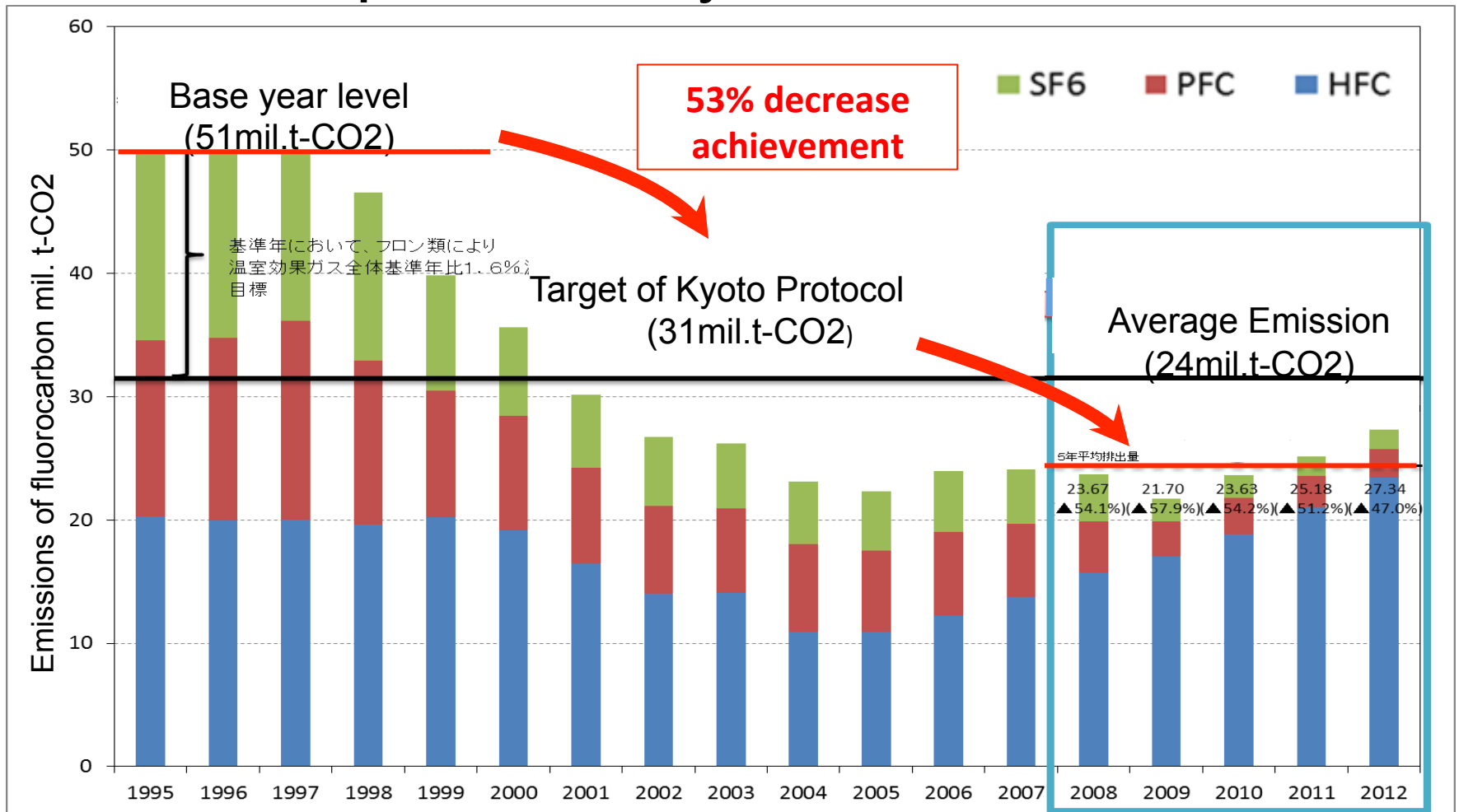
Fluoride Gases Management Office

Ministry of Economy, Trade and Industry, Japan

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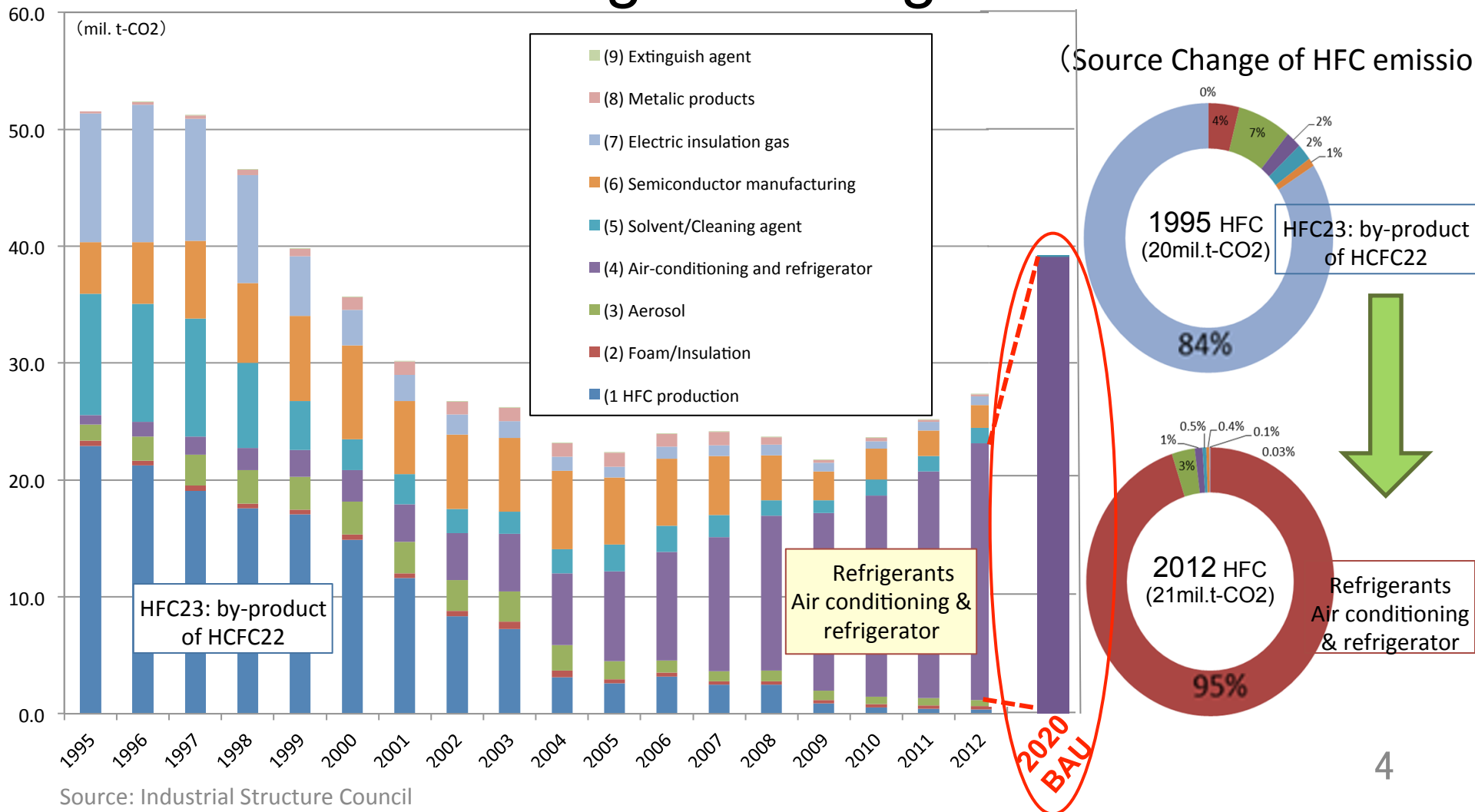
# Status of emissions of HFC, PFC and SF6 (HCFC alternatives) reduction during the first commitment period of Kyoto Protocol



# 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)

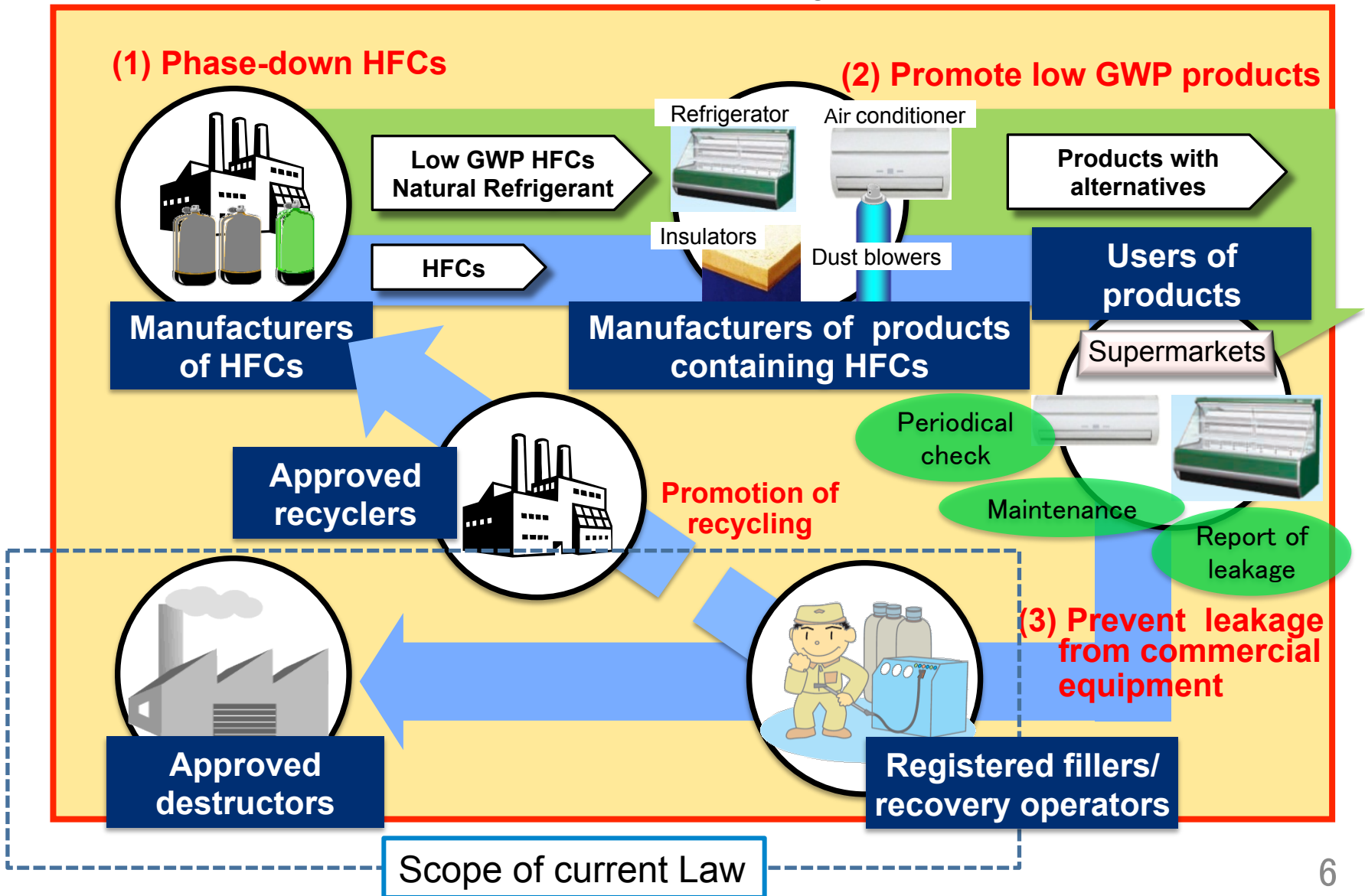
4. Filling by registered operators and recycling by licensed operators

etc.

Revised law promulgation (June 2013)

# Revised Law Covers total Lifecycle

Planning to be effective from April 2015



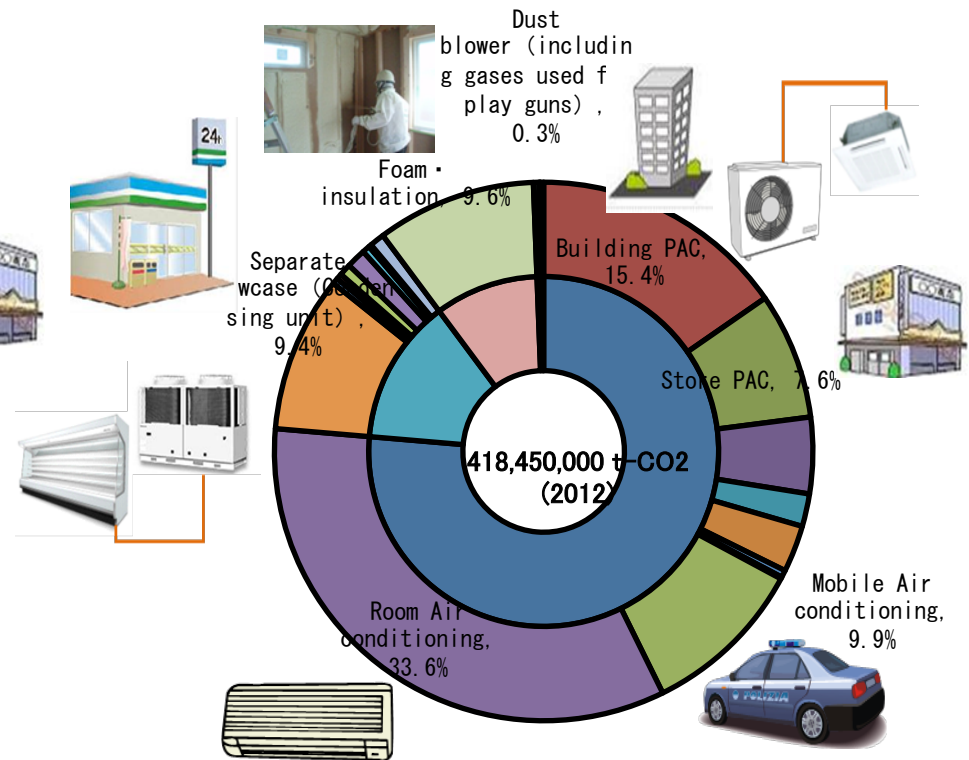
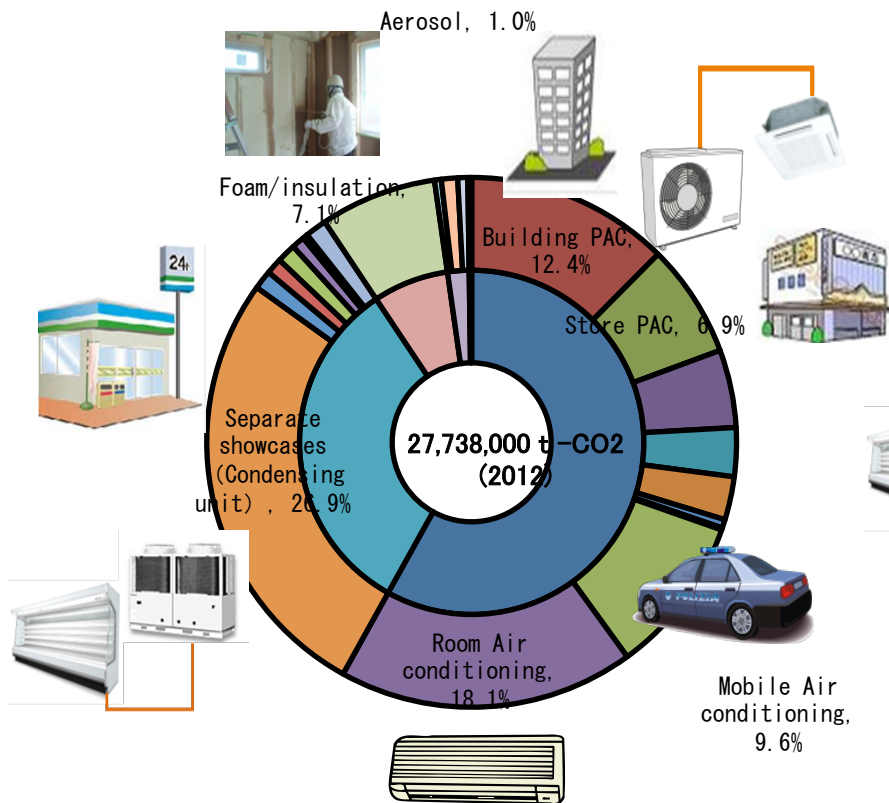
# Possible target of designated products and equipment using fluorocarbons

## (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

- 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

Index related to environmental impact

High-GWP

Low-GWP

Base year

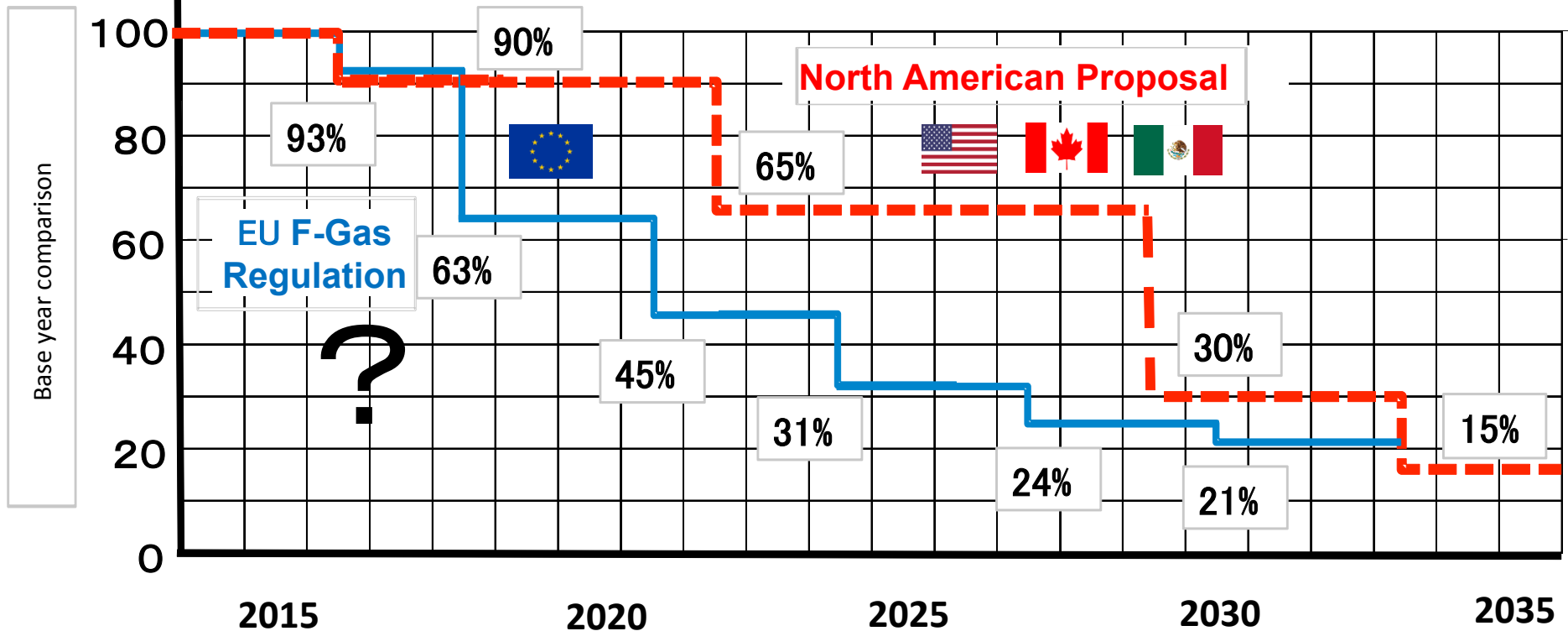
Target year



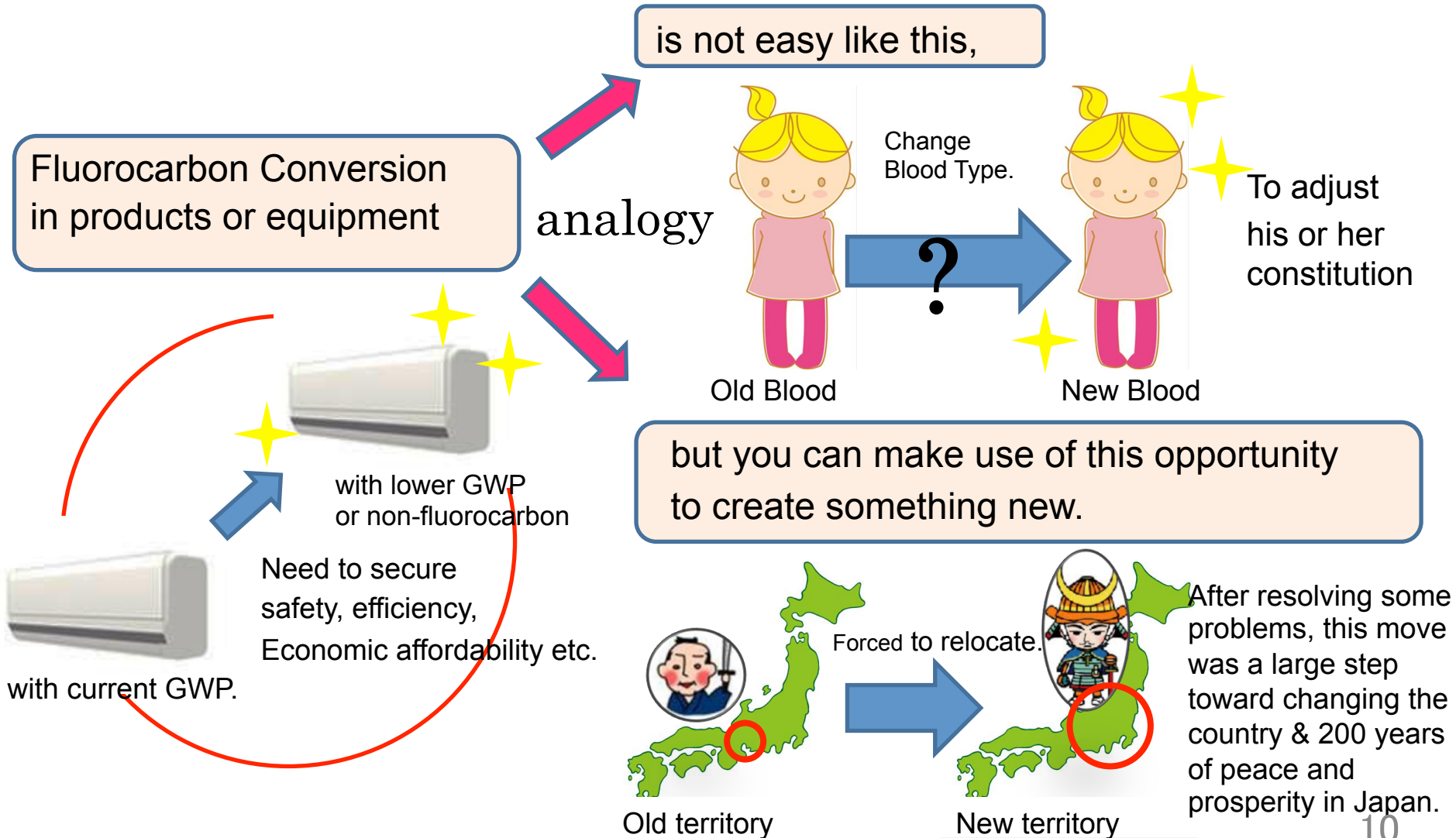
# Image of measures to conduct HFCs phase-down

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?

