

JRAIA Basic Policy

2015-2-3

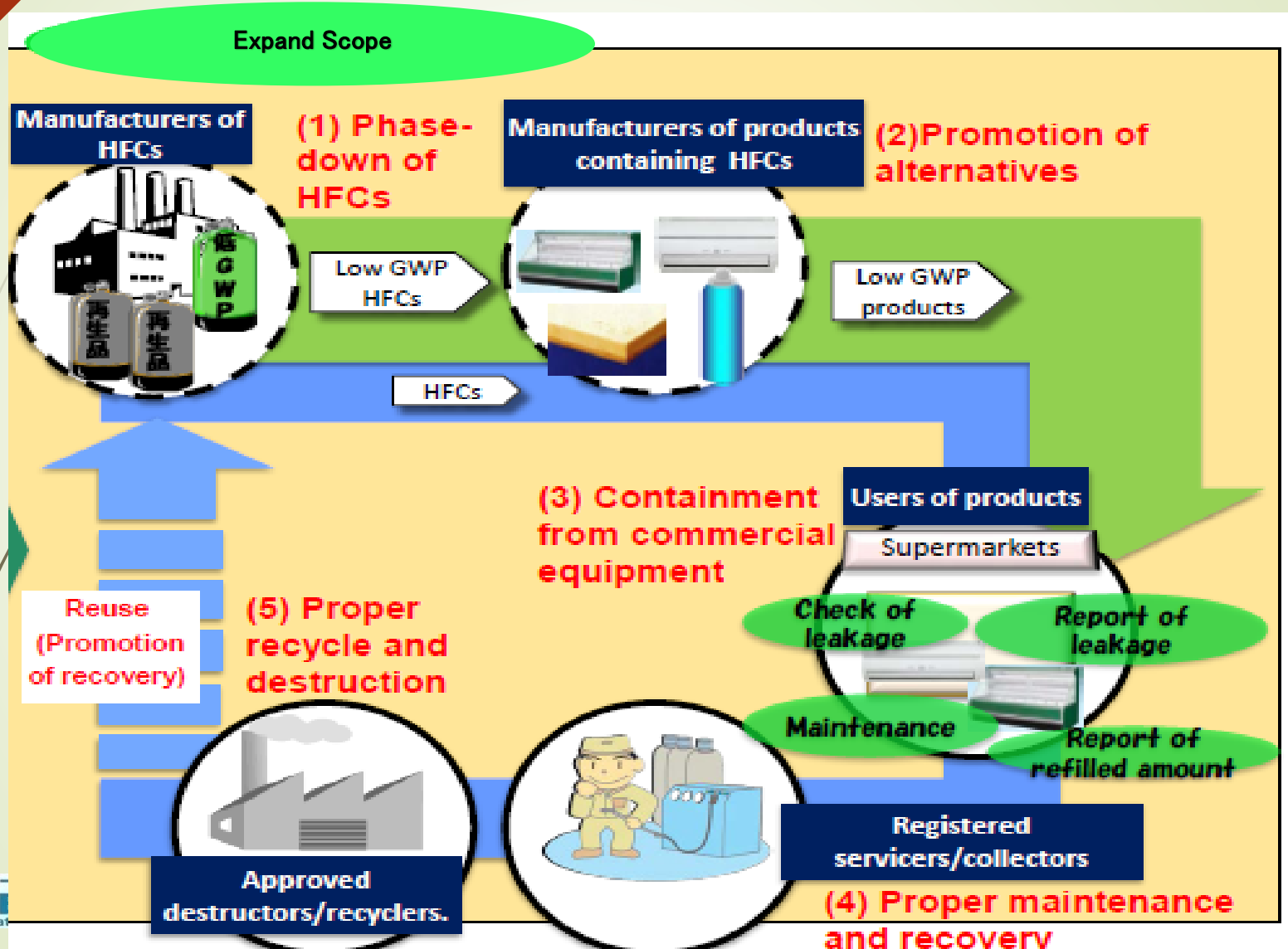
ATMOsphere in Tokyo

Tetsuji OKADA ; Japan Refrigerant and Air
Conditioning Industries Associations

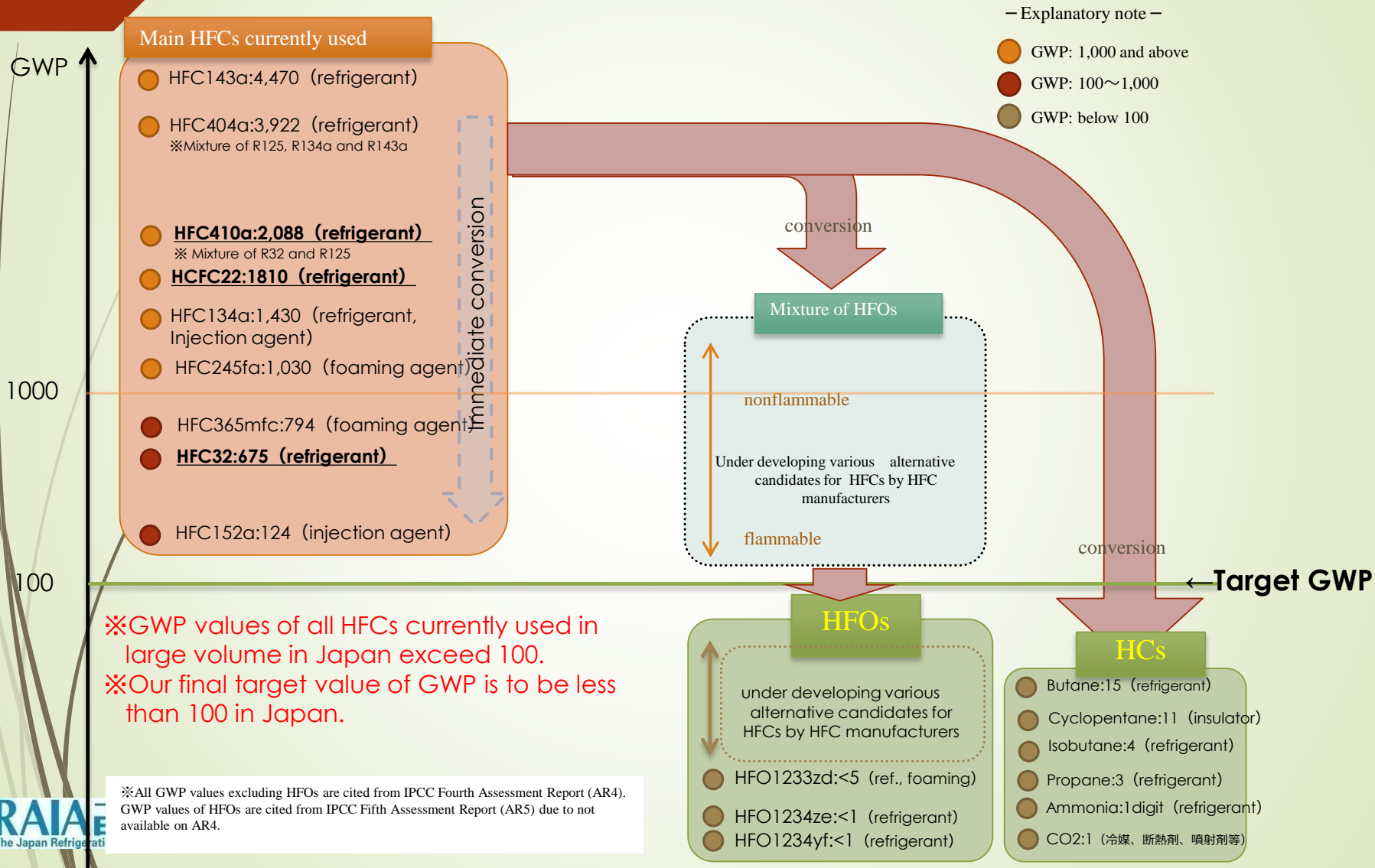
1. Market Situation in Japan

Products	k-Units(01-12/2014)	Expansion Ratio(%)
Residential air conditioners	8,499.6	94.3
Commercial air conditioners	836.0	103.9
Residential heat pump water heaters	436.1	98.6
Gas engine-driven air conditioners	31.4	114.9
Water chilling units	12.9	106.7
Air to air heat exchangers	131.7	109.1
Commercial refrigerated cabinets	226.0	107.8
Condensing units	88.5	103.8
Refrigeration units	28.7	92.0

2. the Act on Rational Use and Proper Management of Fluorocarbons” in Japan



3. New refrigerants for the next generation.



4. JRAIA's Vision and Activities on Environmental Conservation

EQUIPMENT Energy Saving

Emission control on a CO₂ basis

Top Runner Program

REFRIGERANTS Direct Emission Control

- Promotion of recovery
- Measures against leakage (proper management of refrigerants)
- Reduction of amount charged into equipment

ALTERNATE REFRIGERANTS

Acceleration to shift to new refrigerants

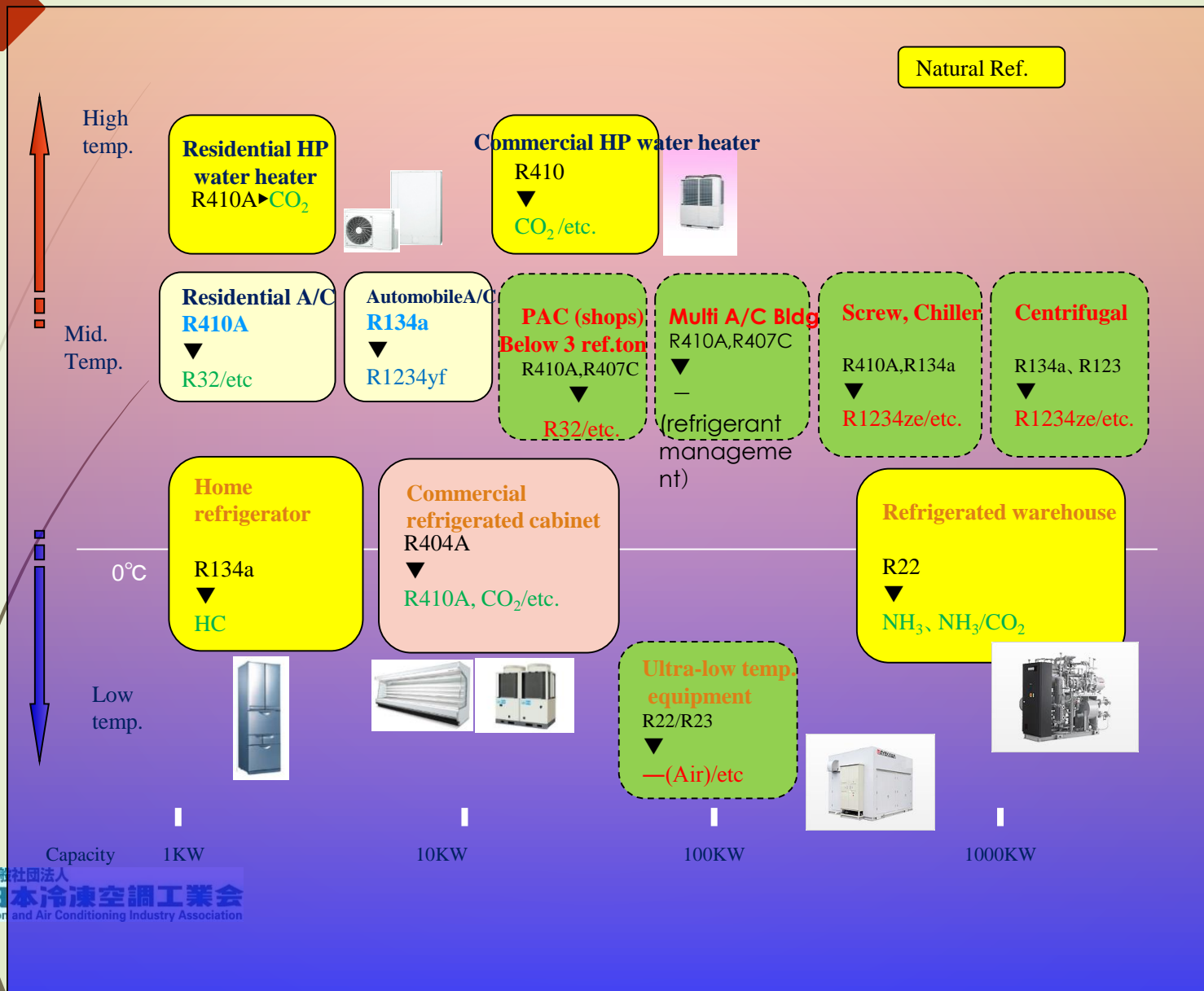
- Use of none HFC refrigerants
- Research of low GWP refrigerants and NR

Freon Recovery & Destruction Law ⇒ Revised Law

Home Appliances Recycling Law

End-of-Life Vehicle Recycling Law

5. Candidates for the next generation refrigerants by applications



6. Conditions required for the alternatives

3E+S

Environment
Performance

- Ozone Depletion Potential = 0
- Low Global Warming Potential

Economic
Feasibility

- Reasonable Cost
- Acceptable level
in Developing Countries

Energy
Efficient

- Superior for LCCP value
- Similar performance
at high load cooling

Safety

- Low Toxicity
- Low Risk of Flammability

Warning!!



Please do not use the unspecified refrigerant by manufacturers.

If you use it to your own equipment, it can cause mechanical failure or malfunction which can lead to a major obstacle for security in the future.

There is also a risk that pose a significant obstacle to ensuring safety.

In case of hydrocarbon (HC) such as propane, there is a fear that leads to **serious disaster such as a fire or explosion**.

You can never get any maintenance or warranty from the manufacturers or the installers who were not involved in the using unspecified refrigerants in case of the failure, trouble or accidents.



Thank you for your kind attention.