

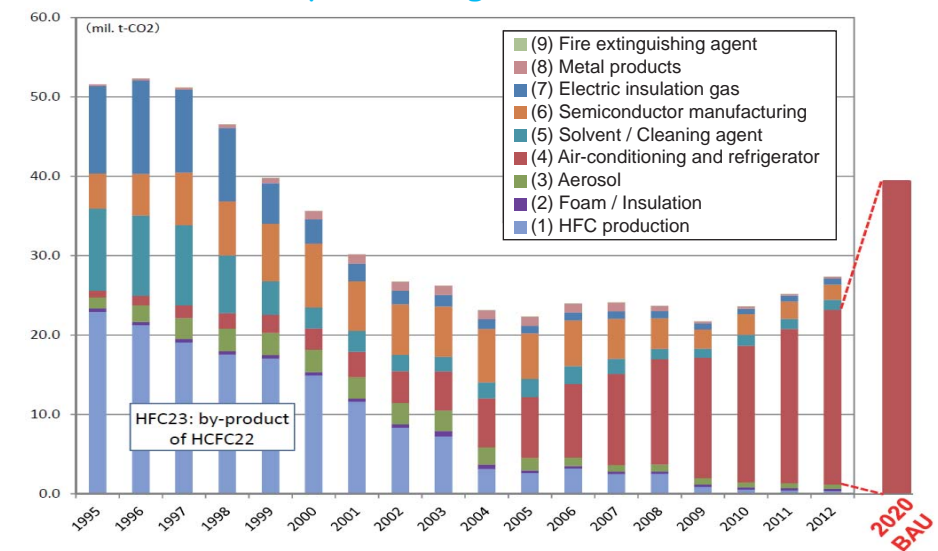


Comprehensive measures throughout the life cycle of fluorocarbons

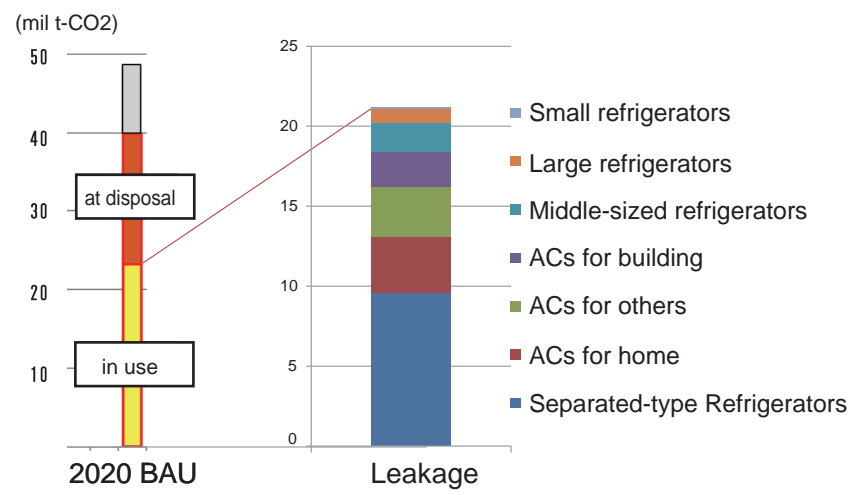
In Japan, since 2001 under the "Law Concerning the Recovery and Destruction of Fluorocarbons", CFCs, HCFCs, and HFCs have been recovered from commercial refrigerators and air conditioners at the time of maintenance and disposal of equipment and have been recycled or destroyed in order to prevent fluorocarbons from being released into the air.

However, HFCs emissions have been increasing rapidly and are expected to double in 2020 as compared to the emissions in 2011 from refrigeration and air conditioning equipment. The recovery rate of fluorocarbons from end-of-life commercial refrigerators and air conditioners remained low (about 30%) and it was found out that refrigerant leakage from the equipment in use was much higher than expected due to poor maintenance, aging, etc.

In light of this, the government of Japan decided to amend and strengthen the "Law Concerning the Recovery and Destruction of Fluorocarbons" in order to implement comprehensive measures throughout the life cycle of fluorocarbons. The amended law has come into force on 1 April 2015 as the "Act on Rational Use and Proper Management of Fluorocarbons".



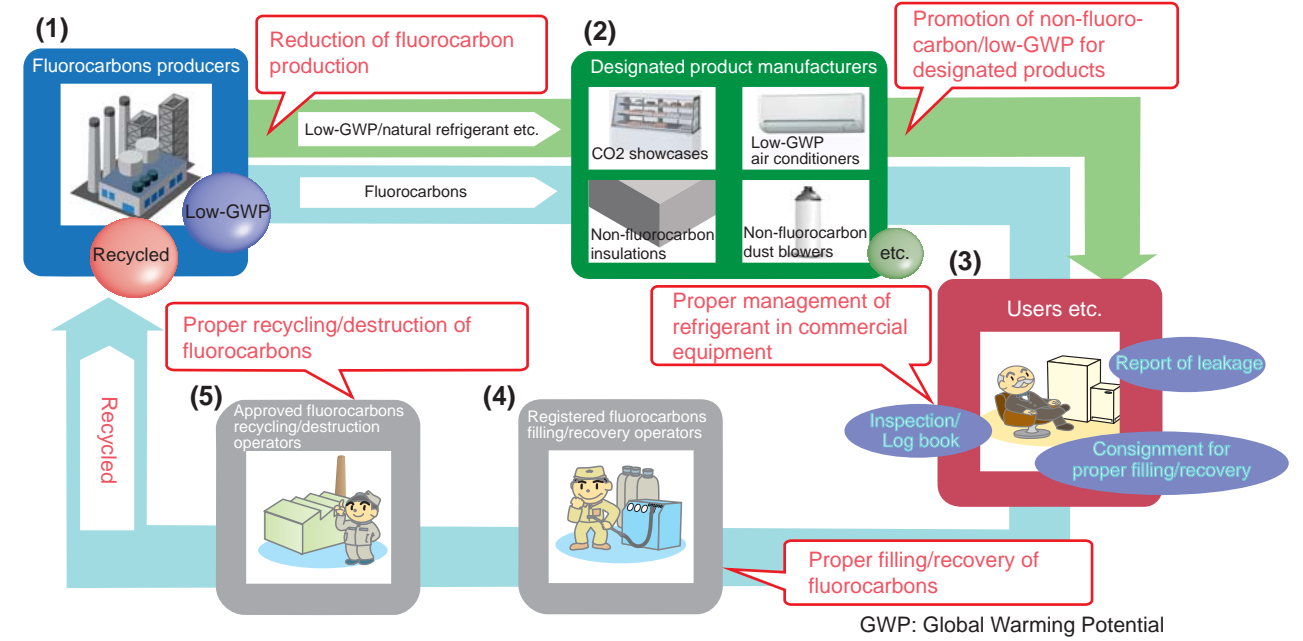
Estimated fluorocarbon emissions from refrigeration and air-conditioning in 2020



Estimated fluorocarbon emissions and leakages by sector in 2020 (BAU)

Outline of the Act on Rational Use and Proper Management of Fluorocarbons

Life cycle of fluorocarbons



Major responsibilities of stakeholders

<Measures for the rational use of fluorocarbons>

(1) Fluorocarbons producers

Producers and importers of fluorocarbons must make the rational use of fluorocarbons, including the production of alternatives for fluorocarbons in accordance with the evaluation criteria established by the national government.

(2) Designated product manufacturers

Manufacturers and importers of designated product must strive to reduce environmental impact due to fluorocarbons in accordance with the evaluation criteria established by the national government.

<Measures for proper management of fluorocarbons used for specified products>

(3) Users/ maintenance operators/ disposal operators of specified products

Users of specified products carry out inspection of the equipment in accordance with the evaluation criteria for initiatives by users.

They must report calculated leakage amount to the national government if there is leakage of a certain amount or more of fluorocarbons.

When filling and recovery of fluorocarbons or disposal of equipment (including transfer of equipment for the purpose of using it as the raw material or parts of new equipment) is necessary, maintenance operators and disposal operators of specified products must consign filling/recovery of fluorocarbons or deliver fluorocarbons to a registered filling/recovery operator.

(4) Registered fluorocarbons filling/recovery operators

Registered fluorocarbons filling/recovery operators must comply with the filling/recovery criteria in filling or recovering fluorocarbons. If they do not recycle recovered fluorocarbons by themselves, they must deliver fluorocarbons to an approved fluorocarbon recycling operator or an approved fluorocarbon destruction operator.

(5) Approved fluorocarbons recycling/destruction operators

Approved fluorocarbons recycling/destruction operators must recycle or destroy delivered fluorocarbons in accordance with the standards for the recycling/destruction of fluorocarbons.

● Specified products are commercial refrigerators and air conditioners containing fluorocarbon refrigerants. (Automobiles' mobile air conditioners are separately regulated under a different law, i.e. the "End-of-life Vehicle Recycling Law".)