

3Rs (Reduce, Reuse, Recycle)

As waste material countermeasures, the 3Rs require reductions in the volume of waste through product resource conservation, longer life of products, and reduced generation of by-products in production processes (Reduce); reuse of components (Reuse); and recycling of components (Recycle).

ASR (Automobile Shredder Residue)

After disposal of fuel, oil, and the like by end-of-life vehicle dismantlers, the engines, transmission, tires, batteries, and other parts are separated and the remaining bodies and other parts are dispatched to a shredding facility. They are turned into shredder residue after steel and nonferrous metal particles are separated out for recycling. Recycling technology for this residue is now under development.

Dioxins

This is a generic term that denotes polychlorinated dibenzo-p-dioxin (PCDD) and polychlorinated dibenzofuran (PCDF). Depending on the location and number of occurrences of chlorine there are many types whose degree of harmfulness varies. There are some that cause deformities and some that are carcinogenic. Dioxins appear unnoticeably in the manufacture of chemical substances and their combustion. In the Law Concerning Special Measures against Dioxin (promulgated in July 1999), PCDD and PCDF, including coplanar PCB, are defined as dioxins.

End-of-life vehicles

Automobiles, including motorbikes, whose use for transportation has ended, are disposed of by dismantling, destroying, burning, or landfill.

Environmental Impact

In the Environment Basic Law, this is "that which, as a result of human activity, affects the environment and is a cause of interference in environmental conservation."

Environment Management System (EMS)

Environment management system positions environmental conservation measures as one link in corporate activity and involves planning, implementation, and evaluation in this connection. Depending on the type of evaluation, measures are implemented to achieve certain objectives. The organizational set-up for administering these operations is the EMS.

Fluorocarbons Recovery and Destruction Law

This legislation prohibits emitting fluorocarbons into the atmosphere in vain because they cause ozone layer depletion and global warming and requires collecting and destroying them appropriately at the time of disposal of machines. Chlorofluorocarbon (CFC), hydrochlorofluorocarbon (HCFC) and hydrofluorocarbon (HFC) that are used as refrigerant for car air-conditioners and refrigerators and air conditioners for business use are subject to this law. (This law went into effect in June 2001.)

Greenhouse gases

These are gases (CO₂, methane, CFC alternatives, and others) that absorb the heat (infrared rays) released by the sun-warmed surface of the earth and cause global warming. Greenhouse gases absorb heat and warm the air, but as their density increases more heat is absorbed and the air temperature rises, resulting in global warming.

Law on Promoting Green Purchasing

This law aims to promote procurement of environmentally aware products (products and services contributing reduction of environmental impact) by ministries, agencies and other central governmental bodies. It also aims to promote the creation of a society able to sustain development by shifting demands over through promoting to provide adequate information on environmentally aware products. (The law went into force in April 2001.)

Law on Recycling End-of-life Vehicles

The law obligates automobile manufacturers and other related companies to share roles to recycle and deal with end-of-life vehicles appropriately. Automobile manufacturers are obliged to recycle or appropriately deal with CFCs used for air conditioners, shredding dust

and air bags.

The law was established out of the need to 1) reduce the amount of shredding dust because of a shortage of dump yards of waste materials; 2) to prevent illegal dumping and improper treatment; and 3) to work on environmental issues such as depletion of the ozone layer and global warming and so on. This is thought to be an important law to create a recycling-based society in Japan. (This law was promulgated in July 2002.)

Modal Shift

This refers to conversion of the transportation configuration with a view to enhancing energy efficiency in distribution and making restrictions on emissions of exhaust gas and the like more effective.

Natural gas cogeneration system

This system not only burns natural gas to generate electric power but also takes out the heat collected by exhaust air and cooling water in the form of hot water or steam to use. The energy efficiency is as high as 70 to 80% since the electric power and the heat are used at the same time. This system has advantages such as no SO_x emissions and less CO₂ emissions compared with oil at the electric power generation; and less loss of electricity by transmission because it is generated at the place it is used.

PRTR Law (Law Concerning Reporting of the Release into the Environment of Specific Chemical Substances and Promoting Improvements in Their Management)

This legislation requires ascertaining the situation of chemical substance emissions and reporting to the central government via local governments. The amount of polluting substances emitted into the environment or amount transferred as waste is registered, and tabulated and made public by the government. Class 1 Designated Chemical substances number 354. (The law went into force in April 2001.)

Recycling-based society

As an alternative to the existing high-consumption, high-waste society, this is an economic society that aims at the simultaneous achievement of environmental consideration and the pursuit of economic rationality through the reduction, reuse, and recycling of waste material, restricting as much as possible the use of new resources and minimizing the volume of emissions.

Resource Effective Utilization Promotion Law

This legislation, which went into force in April 2001, requires manufacturers to conserve resources and promote reuse and recycling in their products and raw materials. The law covers 69 items, including home electrical appliances, automobiles, and personal computers.

Stratospheric platform

Stratosphere generally means an atmospheric region from the tropopause about 11 kilometers altitude to about 50 kilometers altitude. It has a thermal gradient opposite of one in troposphere that the temperature rises as the altitude becomes higher, and the air becomes a layer without mixing up and down. Weather phenomena such as typhoons and clouds occur in the troposphere and they hardly influence the stratosphere. The stratospheric platform is a flying body that stays at a place in the stratosphere with characteristics shown above. There are two types, the airship type and the airplane type.

VOC (Volatile Organic Compounds)

This is a generic name of organic compounds that exist in the form of gas in the air. It includes trichloroethylene, tetrachloroethylene, formaldehyde, toluene, benzene and xylene. They have a high ability to dissolve fats and oils and it has characteristics that make them hard to decompose and burn. Consequently, they spread in the industry as ideal cleansing agent in 1970s, but they could be harmful (causing headaches and dizziness after suctioning) and carcinogenic.

Zero emissions

This aims at building a recycling-based society in which the recycling of waste from industrial and other activities and the prevention of waste generation results in a society with no waste. "Zero emissions" has a variety of meanings, but for FHI it is activities that bring a zero level of waste material disposed of in landfills.