

# Managing Chemical Substances

Chemical substances possess inherent properties that offer outstanding benefits. At the same time, however, chemical substances can harm people's health and place a burden on the environment if they are misused.

One element of Fuji Electric's Environmental Vision 2050 is the realization of a society that is in harmony with nature. To accomplish this element of the vision, we practice appropriate management of chemical substances while working to reduce their use in order to prevent damages to ecosystems.

[↓Managing and Reducing the Use of Chemical Substances](#)

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## Managing and Reducing the Use of Chemical Substances

Fuji Electric set a goal of reducing its environmental emissions of chemical substances by 40% compared with levels recorded in fiscal 2000 by fiscal 2010. This target covers emissions of chemical Pollutant Release and Transfer Register (PRTR)\*1 Law-designated substances and for atmospheric emissions of volatile organic compounds (VOCs) in accordance with the voluntary action plan put forward by Japan's four electrical and electronics industry organizations\*2 based on the Air Pollution Control Act. Emissions of PRTR-designated substances in fiscal 2010 were down 40.4% compared with levels recorded in fiscal 2000. Atmospheric emissions of VOCs were reduced by 62.2%. In each case, Fuji Electric successfully achieved its targets.

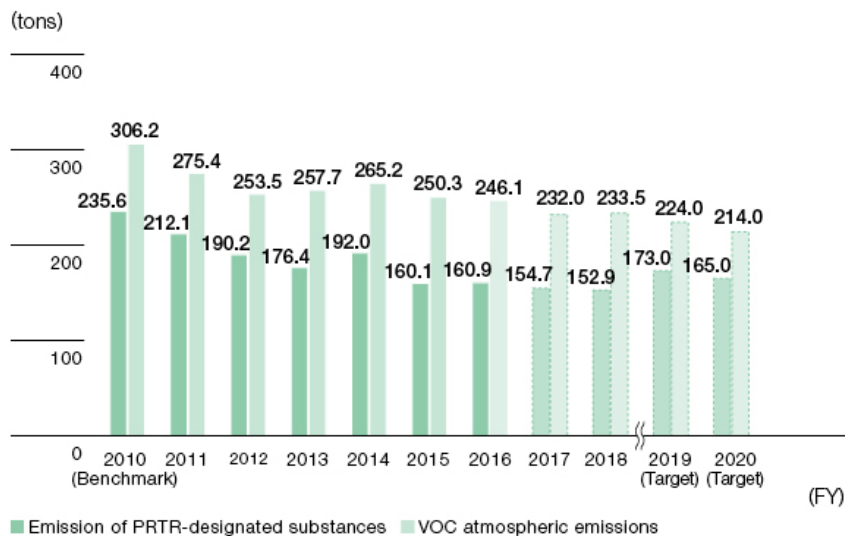
Since fiscal 2010, Fuji Electric has sought to achieve voluntary targets set as part of its Environmental Management 3-Year Rolling Plan. In fiscal 2018, we targeted a 23% reduction in chemical substance use from fiscal 2010 levels. We achieved this target both for PRTR-designated substance emissions, which were reduced by 39.0%, and for atmospheric emissions of VOCs, which were reduced by 23.7%.

Overseas, we have conducted surveys of PRTR-designated substances and VOC emissions since 2012, and we will work to control emission levels to achieve a target of keeping emissions levels below those from fiscal 2013. In fiscal 2018, emissions of PRTR-designated substances decreased approximately 98 tons year on year and VOC emissions were down by roughly 116 tons.

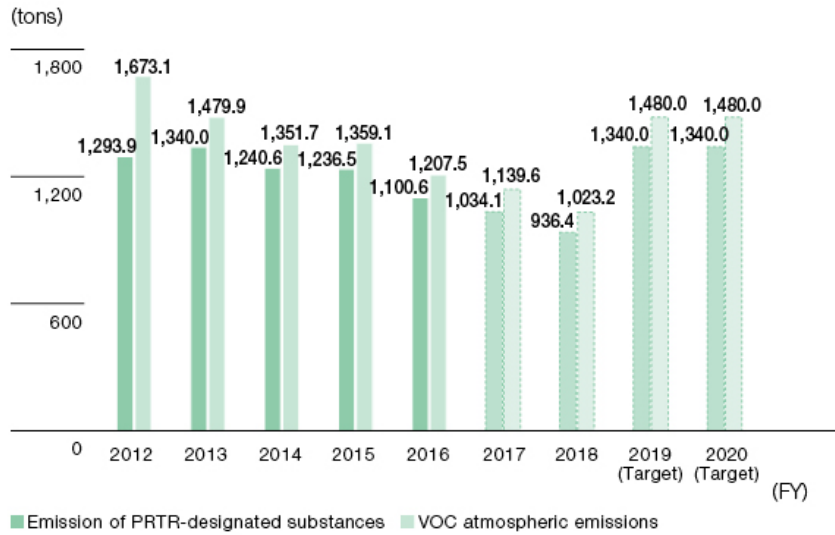
\*1 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

\*2 The four electrical and electronics industry organizations were The Japan Electronics and Information Technology Industries Association (JEITA); the Communications and Information Network Association of Japan (CIAJ); the Japan Business Machine and Information System Industries Association (JBMA); and the Japan Electrical Manufacturers' Association (JEMA).

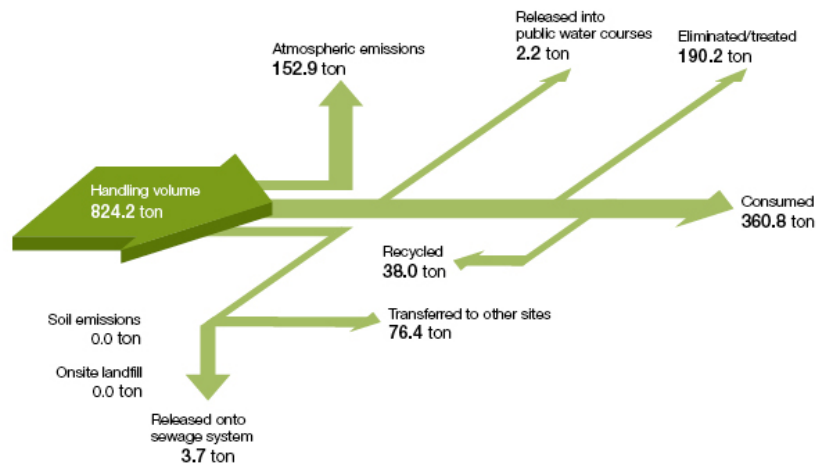
### Amount of Emissions of PRTR-Designated Substances and VOC Atmospheric Emissions in Japan



### Amount of Emissions of PRTR-Designated Substances and VOC Atmospheric Emissions overseas



#### Material Balance of PRTR-Designated Substances in Japan



Note: Wastewater is properly treated using wastewater treatment equipment at all production bases, and wastewater standards have been met. Accordingly, there have been no discharges of heavy metals or other substances into water environments that exceed standards.

#### Managing Chemical Substances Contained in Products

Fuji Electric aims to comply with the laws and regulations in the various parts of the world that are destinations of its products and to reduce environmental impacts across product lifecycles. We are therefore working to reduce the hazardous chemical substances we use and to improve equipment performance.

In regard to reduction of hazardous chemical substances, we have established the ECP Council,\* which promotes the Companywide information sharing and target setting, evaluation, and execution of product compliance activities. Specifically, the ECP Council has established techniques for reducing and replacing substances such as lead (solder, parts, and paint), cadmium (contacts), hexavalent chromium (screws and rust prevention), mercury (lamps and batteries), specific bromine-based flame retarders (resin products), and chlorofluorocarbons (refrigerants). The council is now working to expand the scope of products subject to these activities to as many products as possible, not just those for which such management is legally mandated, in order to reduce and substitute hazardous chemical substances. Major initiative results include the following.

In the vending machine business, Fuji Electric leads the industry with its ability to utilize lead-free technologies (accomplished in 2005) and its technologies for practical application of non-fluorocarbon and coefficient 1 (R1234yf) refrigerants (developed in 2011).

A total of 35 X-ray fluorescence analyzers were introduced (in 2003 and 2004), placing these devices in all domestic and overseas component factories for use in component receiving inspections.

In fiscal 2017, we endeavored to reduce and find substitutes for specific phthalate esters (resin plasticizers), and we plan to complete substitution by the legally required date (July 2019 or July 2021 for certain products).

Meanwhile, as management of chemical substances contained in products is based on information about parts and materials used for products, we worked on improving and increasing the sophistication of databases to manage these types of information to support a variety of examination schemes.

Overseas factories implement appropriate measures for chemical substances following the instructions from mother factories in Japan.

**Note:**\* ECP Council: Environmentally Conscious Product Council The Council is a subordinate organization of the Fuji Electric Global Environmental Promotion Responsibility Council and consists of design and development members.  
Sessions are held regularly at intervals of twice to three times a year and targets and results are managed according to higher-level policies.