

## Managing Chemical Substances

All 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. Fuji Electric manages chemical substances appropriately and works to reduce their emission.

[Managing and Reducing the Use of Chemical Substances](#)  
[Managing Chemical Substances Contained in Products](#)

### 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 worked to achieve a voluntary 16.7% reduction from fiscal 2010 levels by fiscal 2016, based on our Environmental Management 3-Year Rolling Plan. We achieved this target both for PRTR-designated substance emissions, which were reduced by 31.3%, and atmospheric emissions of VOCs, which were reduced by 19.6%.

Initiatives to reduce the use of chemical substances are to switch to alternatives while working to overcoming issues related to production technologies and quality, to install equipment enabling recycling of chemical substances and to devise work process improvements to reduce emissions. Additionally, records of examples of initiatives at each production base are spread horizontally in work processes at other bases.

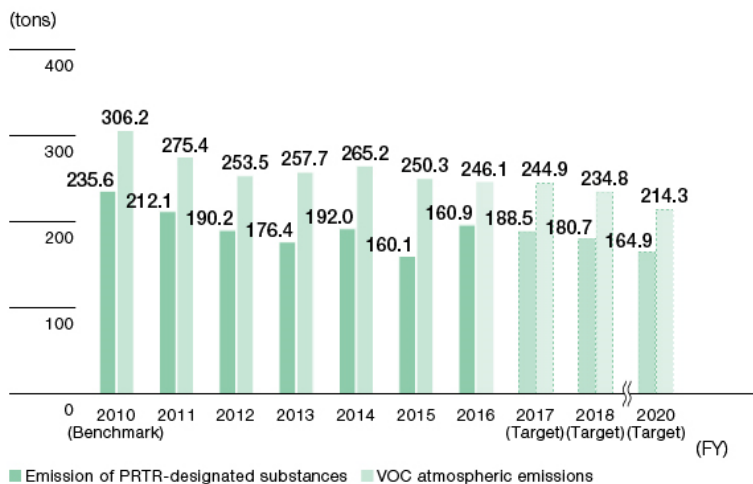
Overseas, we have moved ahead with surveys\*3 of PRTR-designated substances and VOC emissions since 2012 and will work to control emission increases. In fiscal 2016, emissions of PRTR-designated substances decreased approximately 136 tons year on year and VOC emissions were down by roughly 152 tons.

Furthermore, we have already ceased usage of all 20 controlled substances listed in Annex A and Annex B of the Montreal Protocol on Substances that Deplete the Ozone Layer.

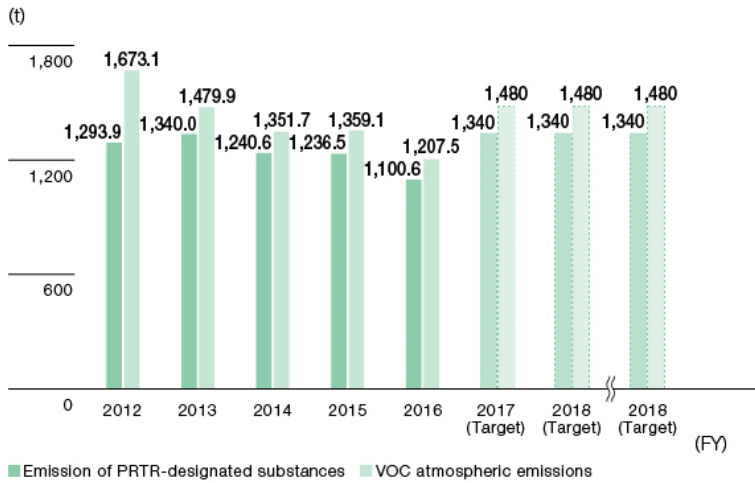
\*1 Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof

\*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).

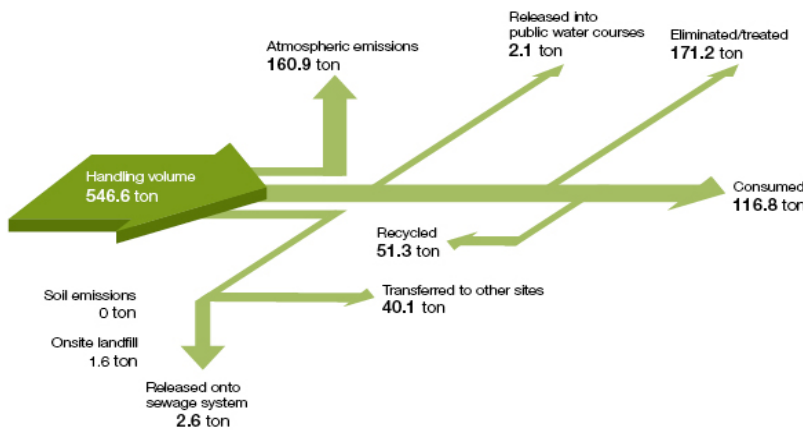
#### Amount of Emissions of PRTR-Designated Substances and VOC Atmospheric Emissions in Japan



#### 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 various parts of the world that are destinations of its products and reduce the environmental impact of product life cycles and is working on reducing the hazardous chemical substances used and improving equipment performance.

Regarding reduction of hazardous chemical substances, we established the ECP Council\* which has worked on company-wide sharing of information and target setting, evaluation and execution of product compliance activities. Specifically, the ECP Council established techniques for reducing and/or 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 CFCs (refrigerants), and is now working on expanding the scope from products subject to legal requirements to as many products as possible to reduce and substitute hazardous chemical substances. As a result of these activities, among other things, we are leading the industry in the application of technologies for vending machines, including lead-free technology (2005) and a non-CFC refrigerant with a GWP factor of 1 (R1234yf) (2011). In FY2017, we are striving to reduce and find substitutes for specific phthalate esters (resin plasticizers).

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 the database to control 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.