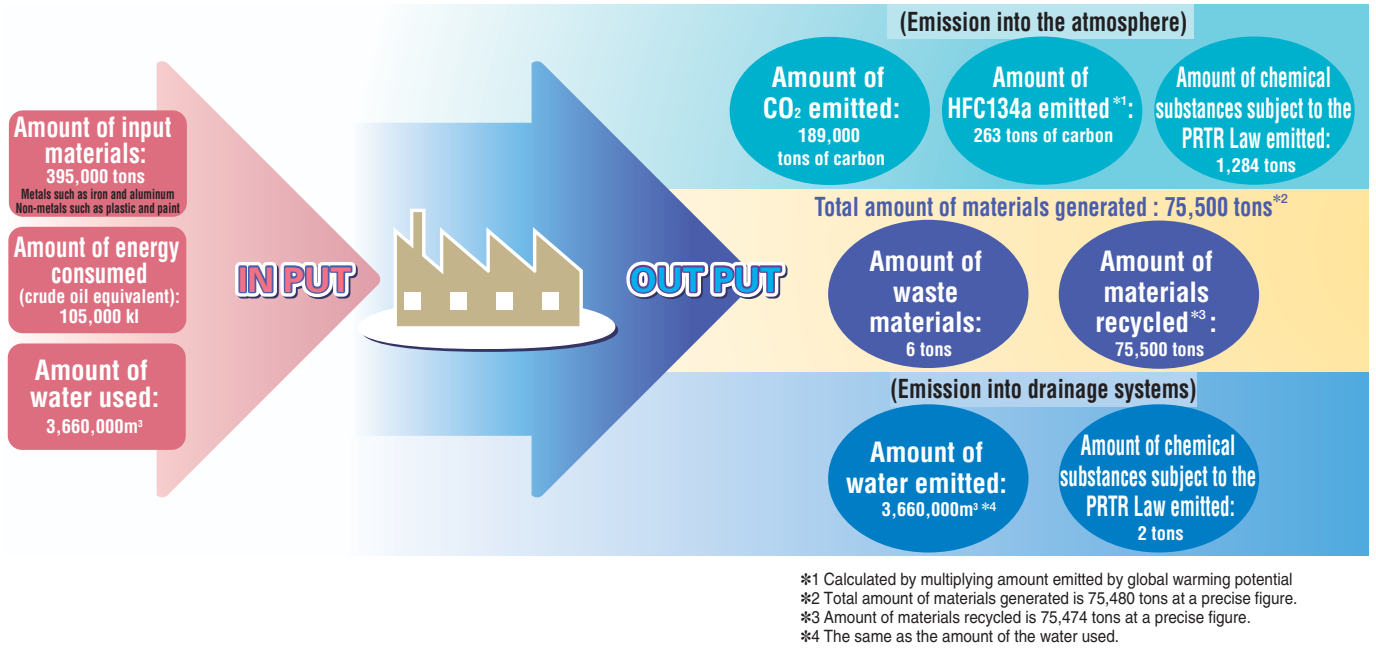


3 Production

Amount of Input Resources and Emission Matters in Plants

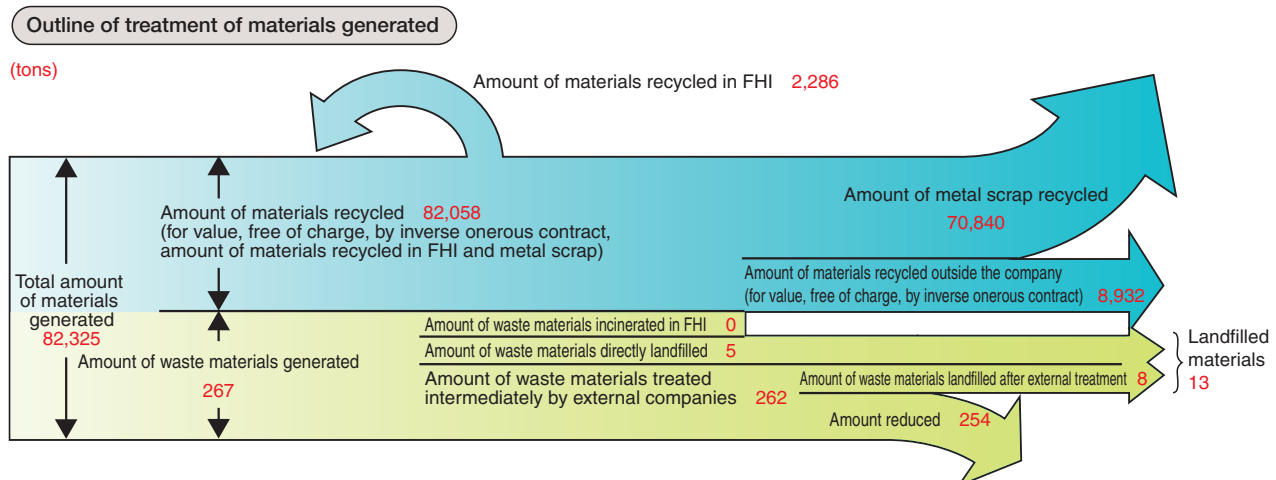
This figure shows the amount of input resources and emission matters in fiscal 2002 at the Gunma Manufacturing Division, our main automobile production plant in Japan.



Reduction of Waste Materials

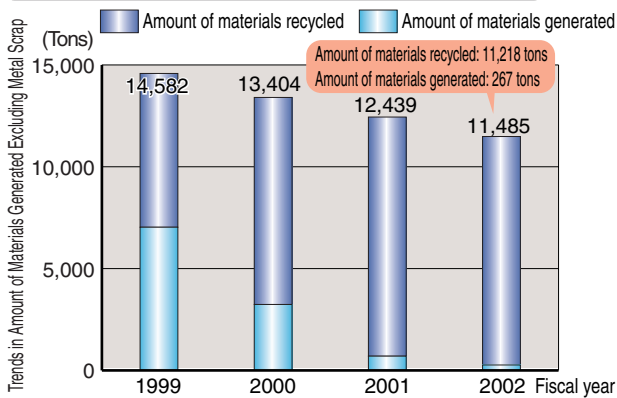
FHI is actively committed to reducing waste at all its plants. At the Gunma Manufacturing Division for development and manufacturing of automobiles, the Utsunomiya Manufacturing Division for development and manufacturing for Aerospace Company and Eco Technologies Company, and the Saitama Manufacturing Division for development and manufacturing for Industrial Products Company, zero emissions has already been achieved respectively.

The total amount of materials generated including metal scrap associated with production activities in 2002 was 82,325 tons in total of all plants, and the materials generated are treated as the figure below shows. All excluding 13 tons of the land filled materials is recycled. The amount of waste material generated (waste materials incinerated in FHI plus waste materials treated intermediately by external companies plus waste materials directly landfilled) was reduced by 62% compared with the previous year to 267 tons in all plants by means of incinerators shut down in all plants to give up incineration of waste materials and enhancement of recycling.



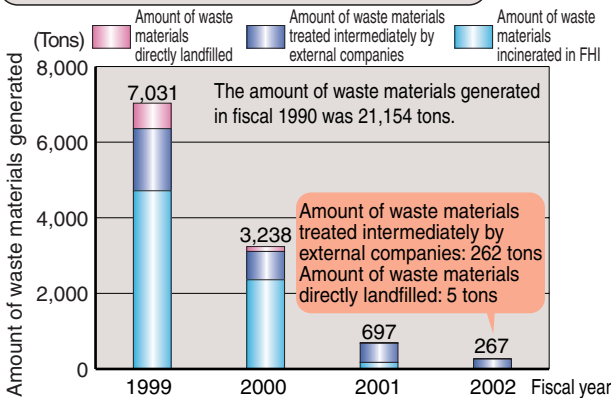
The following chart shows trends in the amount of materials generated excluding metal scrap from fiscal 1999 to 2002. The generation of materials has been inhibited and a recycling rate has increased.

Trends in Amount of Materials Generated Excluding Metal Scrap



The following chart shows trends in the amount of waste materials generated from fiscal 1999 to 2002.

Trends in Amount of Waste Materials Generated

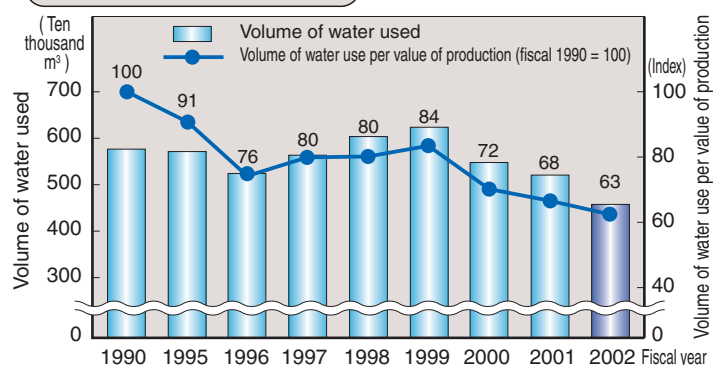


Note: As for trends in amount of waste materials generated after fiscal 1990, see p.26 on 2002 Environmental Report.

Reducing Water Consumption

In fiscal 2002, the volume of water used in FHI was 4,670,000m³ and we were able to achieve a 6.9% reduction compared with the previous year in the volume of water use per value of production. This resulted from the strict maintenance of water pipes and energy conservation measures in everyday operations, and not only because the value of production decreased.

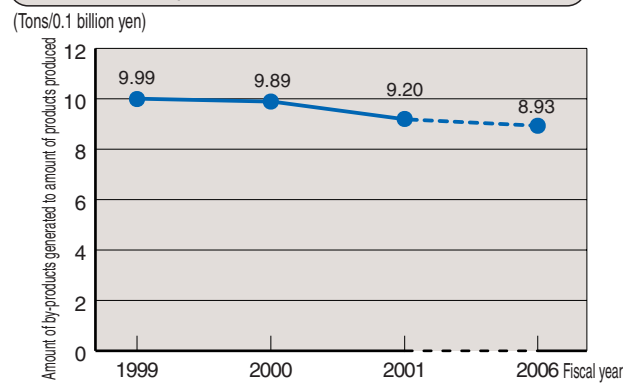
Trends in Volume of Water Used



To Reduce the Amount of Metal Scrap in Automotive Production Process

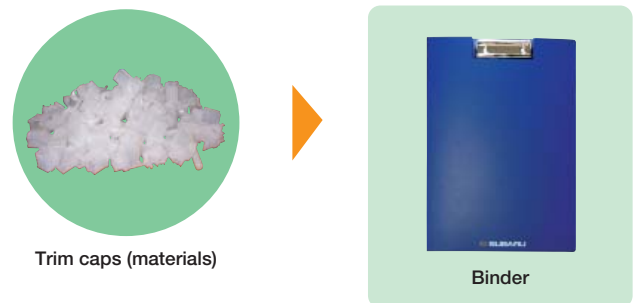
As for metal including iron and aluminum, main material of automobiles, FHI is making efforts to generate as little metal scrap (by-products) as possible by changing the quality of materials for weight saving and improving yield ratio in the production process, in order to improve our automobiles' environmental performance and utilize resources effectively. The following chart shows the past records after fiscal year 1999 and our future plan.

Ratios of Amount of By-products Generated to Amount of Products Produced



Recycling of Trim Caps into Binders

FHI has recycled plastic caps that are attached to purchased automotive components for protection at delivery into materials for binders. Moreover, they are recycled into materials for clear folders.



Energy Saving (Prevention of Global Warming)

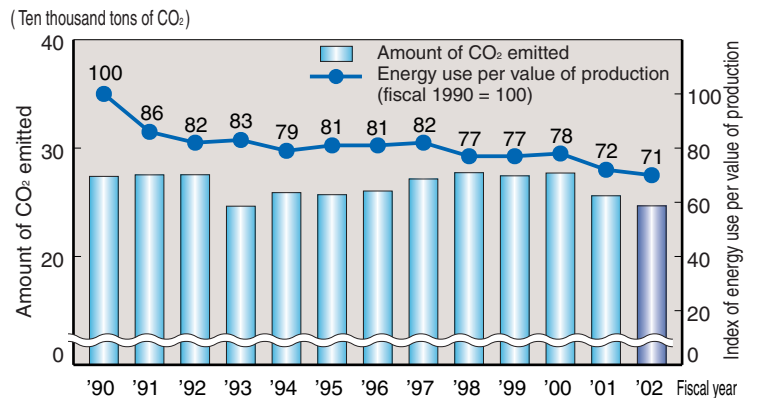
Every FHI plant is committed to improving the energy efficiency of facilities to avoid waste or loss of energy. In September 2002, the Yajima Plant in the Gunma Manufacturing Division implemented natural gas cogeneration system. (See p.31)

In fiscal year 2002, we reduced energy use by 2.9% compared with the previous year to 138,000 kiloliters (crude oil equivalent) in total of all plants, not only because the number of vehicles produced declined by 2.4% while the automotive production is our main business. The total amount of CO₂ emissions reduced 3.7% compared with the previous year to 247,000 tons of CO₂ in fiscal 2002, owing to the reduction of energy consumed and the implementation of natural gas cogeneration system in the Yajima Plant. This is a 9.9% reduction compared with fiscal 1990 levels.

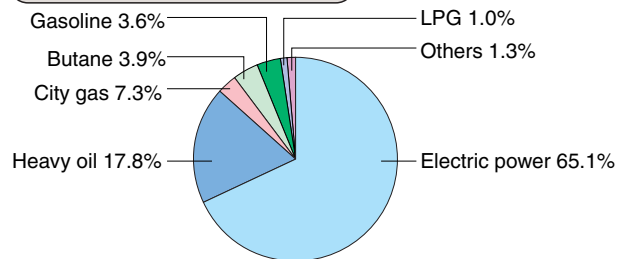
Energy use per value of production declined 2.4% compared with the previous year, which is a 29.2% reduction compared with fiscal 1990 levels.

The amount of greenhouse gas emitted excluding CO₂ (methane, dinitrogen monoxide, HFC, PFC, sulfur hexafluoride) was 370 tons of CO₂ (CO₂ equivalent).

Trends in Amount of CO₂ Emitted



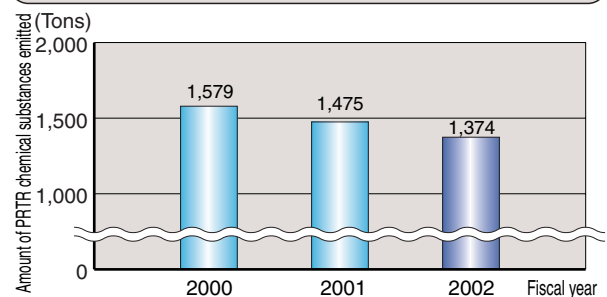
Component Ratio of Energy Used



Management of Chemical Substances (the PRTR Law)

In fiscal 2002, 16 chemical substances subject to the PRTR Law were used by FHI, as detailed below. The total use of such chemical substances was down 0.1%, broadly flat compared with the previous year, but their release to the atmosphere and water was down 6.8%. Major reasons for this include a reduction in the emission of toluene and xylene through reducing the amount of solvent used in the car painting process.

Trends in Amount of Chemical Substances subject to the PRTR Law



Totals of PRTR Chemical Substances Used in Fiscal 2002

(Only amounts handled exceeding 5 tons a year are shown. Substances marked with* are Specified Class 1 Designated Chemical Substances) (Unit: Tons per year, mg-TEQ per year (only dioxins))

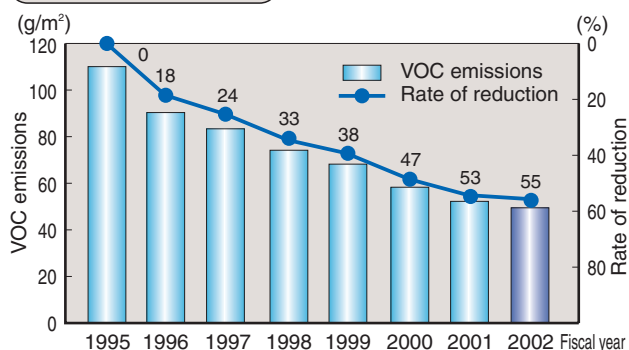
Code	CAS Number	Name	Amount handled	Amount emitted into atmosphere	Amount emitted into public water supply	Amount removed	Amount consumed	Amount eliminated by processing	Amount recycled	Amount treated at our landfills
1	none	Soluble compound of zinc spelter	25.82	0	0.28	4.89	20.64	0	0	0
16	141-43-5	2-aminoethanol	6.20	0	0.50	0.06	0	5.64	0	0
30	25068-38-6	Polymer of 4,4'-isopropylidene diphenol and 1-chloro-2,3-epoxypropane (liquid)	13.19	0	0	1.80	11.25	0.13	0	0
40	100-41-4	Ethylbenzene	146.05	56.09	0	0	65.07	0	24.89	0
43	107-21-1	Ethylene glycol	617.14	0	0	0	617.14	0	0	0
63	1330-20-7	Xylene	1,842.88	884.75	0	8.14	377.56	0	572.43	0
69*	none	Chromium (VI) compounds	2.81	0	0	2.10	0.22	0.49	0	0
179*	—	Dioxins	1.89	1.89	0	0	0	0	0	0
224	108-67-8	1,3,5-trimethylbenzene	43.81	16.48	0	0	19.39	0	7.93	0
227	108-88-3	Toluene	1,032.56	409.13	0	3.47	583.61	0.01	36.35	0
232*	none	Nickel compounds	6.52	0	0.29	4.77	1.46	0	0	0
272	117-81-7	Bis (2-ethylhexyl) phthalate	63.93	0	0	2.51	61.42	0	0	0
283	none	Hydrogen fluoride and its water-soluble salt	6.07	0	1.10	4.94	0	0.03	0	0
299*	71-43-2	Benzene	27.57	0.01	0	0	27.56	0	0	0
310	50-00-0	Formaldehyde	5.41	5.41	0	0	0	0	0	0
311	none	Manganese and its compounds	8.95	0	0.22	4.35	4.38	0	0	0
Total			3,848.88	1,371.87	2.40	37.03	1,789.70	6.29	641.60	0

Reducing Substances with Environmental Impact

Reducing of VOCs Generated in the Painting Process (Automobile Division)

In fiscal 2002, we reduced emissions of VOCs per unit of area painted on the vehicle body to 49g/m², thereby achieving our target of cutting such emissions to 55% of fiscal 1995 levels. One of the main measures was to reduce the proportion of volatile organic compounds (VOC) contained in top coating paints and electrodeposition paints. Furthermore, we will continue to develop water-based paints, which have less environmental impact.

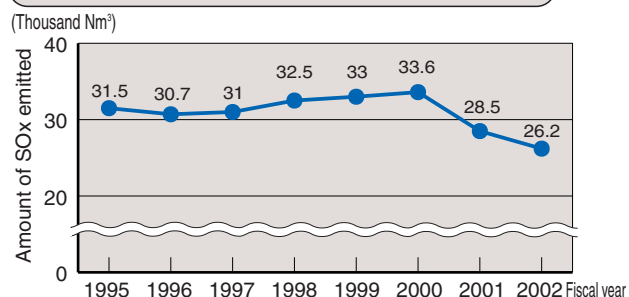
Trends in VOC Emissions



Sulfur Oxide (SOx) Emissions

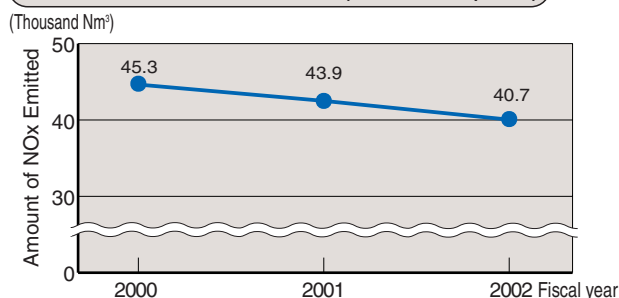
Amount of SOx emitted in fiscal 2002 reduced 8% from the previous year through reducing fuel use for boilers and drying furnaces and implementing the cogeneration system in the Yajima Plant in the Gunma Manufacturing Division.

Trends in Amount of SOx Emitted (In total of all plants)



Nitrogen Oxide (NOx) Emissions

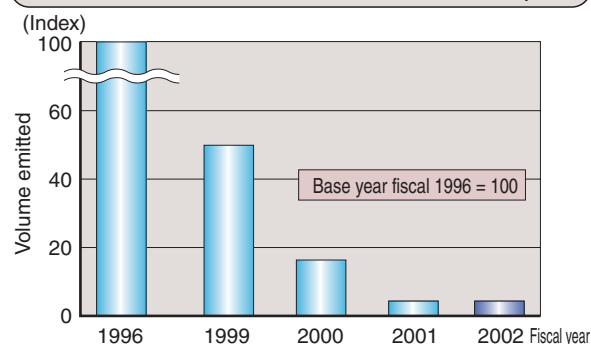
Trends in Amount of NOx Emitted (In total of all plants)



Reducing Use of HFC134a (Automobile Division)

HFC134a, currently used as a CFC-alternatives refrigerant in air conditioners, is also believed to contribute to global warming. To reduce atmospheric emissions from the vehicle manufacturing line, we have been making efforts through minimizing leakage while pumping gas into air conditioners. As a result, we were able to reduce atmospheric emissions to 202kg, which represents a 96% reduction from fiscal 1996 levels.

Trends in Amount of HFC134a Emitted into the Atmosphere



Emissions of Nitrogen, Phosphorous and BOD

The chart below shows the total amount of nitrogen, phosphorous and BOD emitted and included by drainage from all plants in fiscal 2002.

Substance	Nitrogen	Phosphorous	BOD
Amount emitted (Tons per year)	49	12	92

Dioxins Emissions from Incinerators

Incinerators were shut down in the Gunma Manufacturing Division in December 2000, and in Utsunomiya Manufacturing Division and the Saitama Manufacturing Division in September 2002. This means we shut down all of our incinerators in every FHI division, ending dioxin emissions from any sources.



The vacant lot of the incinerator in the Yajima Plant in the Gunma Manufacturing Division is now green space.

Prevention of Pollution

Reduction of the Risk of Finishing Agents' Leakage (the Utsunomiya Manufacturing Division)

We set a watershoot, which is made of stainless steel and whose inside can be inspected, covering the pipes from the finishing facility to wastewater treatment facility. This makes it possible that if finishing agents should leak, leaked liquid flows through transport pipes set under the watershoot to a leakage detective tank. When the tank detects the leaked liquid's inflow, it drains it off to the wastewater treatment facility and gives an alarm at the same time.



Improvement of the Oil Separating Tank (the Gunma Manufacturing Division)

At the Gunma Manufacturing Division, the ability of oil separating tanks at the Main Plant and the Yajima Plant was enhanced.

Oil floatation ability of the oil separating tanks was improved and neutralization equipment of acid or alkaline water was set at the inlets of the tanks in order to prevent from an outflow accident.



The Main Plant
The oil-separating tank of the drainage ditch No.2

Green Procurement

Automobile Division

We held an explanatory meeting on our green procurement activities to suppliers in January 2003, and asked them to set up an environment management system (EMS), that is, to complete ISO 14001 certification procedures or to independently set up an EMS equivalent of ISO 14001. In addition, we explained that we were going to apply International Material Data System (IMDS), an international standard of research system of substances with environmental impact, in order to simplify reports from suppliers and make the FHI's data input more accurate. We also extended our green procurement activities to twelve mass production component suppliers overseas.

221 suppliers out of 291 target suppliers in Japan completed their EMS by March 2003. (176 suppliers did so as of March 2002.) 11 out of 12 suppliers overseas completed their EMS.

Industrial Products Company

The Industrial Products Company also started green procurement activities in April 2001, and it asked about 100 suppliers to set up an EMS and report their use of certain substances designated by FHI. As of fiscal 2002, about 60% of suppliers were setting up an EMS. The survey on the content of substances designated by FHI in engines has been completed.

It has been working on activities for environmental preservation with the suppliers' cooperation, and in fiscal 2002 it abolished delivery of components packaged with cardboard.

Aerospace Company

The Aerospace Company started green procurement activities through holding an explanatory meeting on its green procurement activities with 74 suppliers in December 2002. It asked them to set up an EMS and report their use of certain substances designated by FHI contained in their products and materials as well as give up using substances banned by law in their process of production. Suppliers are going to complete their EMSs by March 2005.

Green Purchasing

In October 2000, the Gunma Manufacturing Division started to compile a list of environment-conscious office equipment, and by March 2003, we use 65 environment-friendly products out of 133 standard office supplies of all plants. In fiscal 2003, we started to make positive efforts to apply environment-friendly products that are similar to products we are currently using.

Natural Gas Cogeneration System Introduced at the Yajima Plant of the Gunma Manufacturing Division

It Aims to Reduce Amount of CO₂ Emitted by 10% Compared with 1990 Levels by 2010.



The Cogeneration System in the Yajima Plant

Since the reduction of CO₂ emitted is total amount control, it is expected to become harder to achieve the reduction target with efforts only at the worksite if the volume of production increases. The Yajima Plant in the Gunma Manufacturing Division producing Legacy, Impreza and Forester had used commercial electric power and heavy oil as energy sources, but it implemented a natural gas cogeneration system in fiscal 2002 in order to implement fundamental changes.

Characteristics of energy use at the Yajima Plant

The Yajima Plant consumes a lot of electric power in the summer and a lot of steam power in the winter. It had purchased commercial electric power from a utility company and made steam by burning fuel with a boiler. Since we can decide to give which of electric power or steam power priority with this natural gas cogeneration system, this system matches well with the loading pattern of the Yajima Plant.

Advantages of the Natural Gas Cogeneration System

- The natural gas cogeneration system burns natural gas to revolve a gas turbine and uses the shaft power to generate electricity. In addition, it changes the exhaust gas from the combustion into steam with a waste heat boiler; therefore it can improve the total

energy efficiency of electricity and heat.

- Natural gas not only emits less CO₂ than other fossil fuel, but also does not emit SO_x which contaminates the atmosphere and emits much less NO_x.

Characteristics of the System Implemented

It uses a gas turbine with variable rate of heat and electricity, which diverted an engine for airplanes. We can decide which of electric power or steam power is generated by priority.

- In the winter when steam power is really needed, it generates steam power by priority.
- In the summer when steam power is not really needed, excessive steam that generated in a waste heat boiler can be sent to a gas turbine and the system generates as much electric power as it can; therefore energy is not wasted.



A steam absorption type water cooler and heater: It takes advantage of waste heat to air-condition a part of the plant.

Outcome of the Implementation

- Due to the implementation of this system, the amount of CO₂ emitted from the Yajima Plant decreased 16% compared with 1990 levels.
- Due to the application of natural gas fuel and the NO_x removal equipment, the amount of NO_x emitted was less than 10ppm. (The regulated value of Gunma Prefecture is 70ppm.)

