ISUZU
Environmental Report
2001

Management Vision

Isuzu's global business in the century of the environment

Yoshinori Ida

President and Representative Director

Appointed as director in 1994. Appointed as managing director in 1999. Appointed as president in 2000. Motto: "Sekisei" (Sincerity Moves Heaven) by Kaishu Katsu.

Preservation of the Global Environment is Our Commitment

Isuzu has always given highest priority to preserve the global environment. Every citizen should be environmentally conscious, and so should corporate management. In light of global warming – the most urgent environmental issue at present – we all must achieve goals that we have set for ourselves.

Actions Leading the Time

Vehicles are internationally traded products so they must exhibit high performance under various conditions. High performances as well as meeting the customer's needs are necessary for gaining ground in the vehicle manufacturing industry. In the coming few years, very rigorous regulations for exhaust emissions and fuel efficiency will be in force in Europe,USA and Asia. It is essential for Isuzu to go one step ahead, such as marketing vehicles that comply with regulations in advance, and supplying products with environmental performance greater than expected regulatory values. We believe this is our responsibility as a vehicle manufacturer.

Isuzu's Worldwide Business Network

Isuzu has the world's most sophisticated diesel engine technologies and has four major production bases in Europe, the United States, Asia and Japan. We have an excellent line up of engines and are aiming to be No. 1 in the world in terms of both quality and quantity.

Contributing to Environmental Protection with Advanced Diesel Engine Technology

Diesel engines are highly appraised in Europe, but do not enjoy the same reputation in Japan. It should be noted, however, that diesel engines have a great potential for environmental protection. With ongoing technological innovations, diesel engines can change its reputation for their excellent fuel efficiency that enables 100 km driving with only three liters of fuel.

Is Diesel Only Misunderstood ?

Vehicles emitting black smoke are rarely seen in Europe, whereas such often occur in Japan. There is a misunderstanding about diesel in Japan caused by traffic jams and poor car maintenance, as well as a lack of consciousness in black smoke until recent years.
We not only need to improve diesel-powered vehicles but also make further considerations about the efficient use of vehicles, such as resolving the traffic jams through governmental initiatives on road construction and maintenance. We also believe we should further promote the people's understanding about the excellent quality and performance of Isuzu's diesel engines, which are collecting awards in the overseas markets.

To Preserve Mother Nature For Future Generations

It is my regret to witness the destruction of nature, which did exist in the age of our generation. We must be careful what to preserve and what we must exploit. I enjoy mountaineering as a hobby, and we mountaineers are gentle to nature and do not litter or waste. If everybody lived with such a mindset, even the "zero emissions" goal would be within our reach.

Learning From Your Opinions and Comments

In this year's environmental report, we did our best to be as specific as possible in providing data. We will be happy if this report will help you deepen your understanding of diesel engines; your suggestions and opinions are greatly appreciated.

Corporate Data

Representative	Yoshinori Ida
Capital	¥90.3 billion (as of March 31, 2001)
Business Operations	Manufacture, sales and service of motor vehicles, internal combustion engines, and their parts
Sales	¥829.9 billion (for the period ended March 2001)
Ordinary profit	¥-10.6 billion
Product lineup	Heavy to light-duty trucks, buses, SUVs*1, engines and components
Employees	12,597 (as of March 31, 2001)
Offices and Plants	Head office, Fujisawa Plant, Tochigi Plant, Kawasaki Plant, Hokkaido Plant, Hokkaido Proving Ground, etc.

*1 SUV: Sport-utility vehicle

Corporate Philosophy

We offer our customers around the world high quality products and services, and we resolve to develop our business in a way that contribute to human needs and social welfare.

Editorial Policy

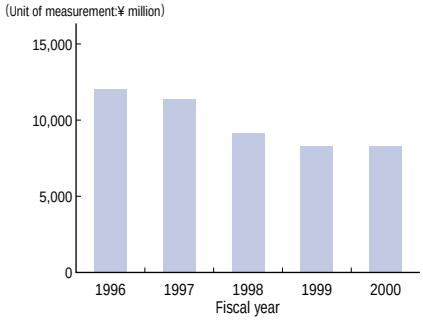
In the Isuzu Environmental Report 2001, we have referenced the Environmental Reporting Guidelines issued by the Ministry of the Environment and the Sustainability Reporting Guidelines issued by the GRI*2. In particular, we did our best to provide readable and easy contents. Our executives' thoughts on the environment and our environmental preservation activities are newly included so as to communicate "Isuzu's principles on environmental preservation" to the public. The first report was published in 1999, and this report represents the third edition.

*2 GRI: The Global Reporting Initiative, an international organization founded with the aim of formulating and spreading worldwide applicable guidelines for sustainability reporting, uniquely emphasizes the reporting of economic, environmental and social aspects.

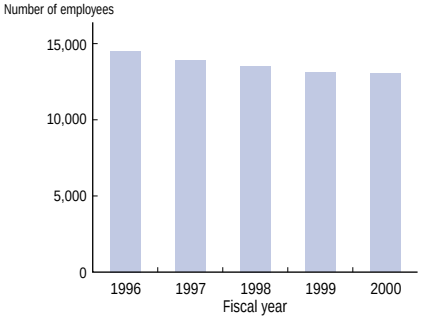
The Scope of Report

Primarily covers Isuzu's environmental efforts in Japan.
Period covered by report: April 1, 2000 - March 31, 2001
Also includes information from periods prior to and following 2000.

Sales



Employees



CONTENTS

Environmental Vision

Masami Awata

Chairperson of the Global Environment Committee
Executive Director

Appointed as president of Isuzu Motors Co., (Thailand) Ltd. in 1994. Via position as president of Isuzu (Thailand) Co., Ltd, appointed as executive director in 1996. Executive of International Division, senior executive of Corporate Administration Division and International Administration. Appointed as chairperson of the Global Environment Committee in 2001.

Balancing Our Use of Vehicles with Global Environment Protection

Most of vehicles, as the core mode of transportation today, depend on fossil fuels, which are directly involved in the issues of global warming and fossil energy depletion. For vehicles to continue to in the future, we need to balance our use of vehicles with the global environment. For this, Isuzu devotes itself to reduce exhaust emissions and to create environmentally conscious offices and plants.

The Isuzu Charter on the Global Environment Based on Our Corporate Philosophy

Under our corporate philosophy, "we offer our customers around the world high quality products and services, and we resolve to develop our business in a way that contributes to human needs and social welfare," Isuzu has always made every effort to preserve the global environment. In 1992, we established the Isuzu Charter on the Global Environment as a guide to environmental protection efforts for all the employees to participate.

We are the Citizens of the Earth

Our basic policy, formulated in May 1992, is to achieve environmental conservation throughout the life of each vehicle, from development and production to the later phases of use, disposal and recycling, while encouraging active participation in social and community environmental preservation not only at the corporate level, but among our individual employees as citizens of this planet.

Established the Isuzu Initiative for the Global Environment and Accomplished the Goals

In 1993, we established the Isuzu Initiative for the Global Environment and have steadily accomplished high environmental goals since then. Our activities include the introduction of an environmental management system, development of clean energy vehicles, energy conservation, waste reduction, cutting the use of substances that have environmental impact, and recycling.

Our Environmental Protection Activities in 2000

To enhance our environmental protection activities, we have obtained an ISO 14001 standard for environmental management system at the engineering division, focusing on the development of clean diesel-powered vehicles, in compliance with the coming long-term emission regulations in Japan. In the field of recycling, we have been engaged in improving the recycling rate at a dedicated division. Our plants have early accomplished our own goals on energy conservation activities and are now making efforts to achieve "zero emissions" for waste disposal at the industry-leading level.

Our 2001 Priority Efforts

For 2001, we are committed to develop super-clean diesel engines that can contribute to the global warming control proposed by the Kyoto Protocol, and the Isuzu group will collaborate to promote the public awareness about the advantages of diesel engines.

Eco-life Interview

I like walking with my dog in woods, and I always feel the importance of conservation of the global environment.

FOR THE FUTURE OF MANKIND AND THE EARTH

ISUZU

Isuzu is committed to preserve the global environment, and has taken the initiative to develop activities aimed at balancing economic development with environmental conservation. To this end, the Isuzu Global Environment Committee was established back in August 1990. In May 1992, we established the Isuzu Charter on the Global Environment with our special environmental logo including the slogan "FOR THE FUTURE OF MANKIND AND THE EARTH."

Isuzu Charter on the Global Environment (established in May 1992)

Policies in Coping with the Global Environment

1. Throughout the life of vehicle from production to usage and disposal, we will cope with the conservation of environment with positive stance.
2. In order to leave beautiful earth to our descendants, not only through business activities but also as citizens of the earth, we will cope with environmental conservation activities of locality and society with positive stance.

Action Directives

1. In production processes of vehicles, we will minimize consumption of energy, control to minimize emissions, and thus cope with the conservation of environment.
2. With regard to exhaust gas, noise, etc. which are generated in the process of using vehicles, we will cope with reduction through development and production of vehicles. Also, through developing logistics systems, we will think out rational logistics and will thus cope with the conservation of environment.
3. Realizing that resources are finite, we will aim to provide vehicles which are loved by customers for long time, and we will, in order to make our vehicles recyclable in disposal process, thoroughly cope with the thought of recycling.

Tsutomu Matsubayashi

Chairperson of the Product Development Environment Committee
Executive Director

Involved in designing and developing passenger cars and SUVs. Appointed as executive director in 1999. Appointed as chairperson of the Product Development Environment Committee in 1999.

Efforts at the Product Development Environment Committee

In 2000, our engineering division evaluated the environmental impact throughout the life of each vehicle and established an environmental management system with priority placed on seven key aspects such as fuel efficiency, exhaust emissions and external noise. This leads us to obtain ISO 14001 certification for our engineering division in June 2001. Minimizing the environmental impact by our diesel products is our corporate commitment.

Eco-life Interview

I am a car enthusiast and I'm often behind the wheel, but I'm always careful not to unreasonably accelerate my car. Careful and safe driving helps to save fuel and cut exhaust emissions and noise.

Goro Miyazaki

Chairperson of the Recycling Committee
Executive Director

Dedicated himself as a field engineer to increasing consumers' high-efficiency and low-cost operation. Appointed as president of Miyagi Isuzu Motors Limited in 1995. Appointed as executive director of Isuzu Motors Limited in 1998. Appointed as chairperson of the Recycling Committee in 1999.

Efforts at the Recycling Committee

The earth is now facing environmental destruction far beyond the self-purification capacity of nature. Mass-production, mass-consumption, and mass-disposal at current levels will continue to produce huge stacks of waste. Our business is not only to manufacture and distribute new vehicles but also control the life of each vehicle as well as waste reduction and recycling. Environmental and safety technology, including recycling are the key technologies for us to survive in the automotive industry. Efficient recycling and reuse of vehicles, and parts regeneration should be critical. We are working on these tasks from both engineering and sales aspects.

Eco-life Interview

I have always loved cars, and driving on holidays is my favorite pastime. I'm always careful to drive in an environmentally friendly way. Bird watching, my other hobby, makes me feel the beauty of mother nature.

Hisaomi Sasaki

Chairperson of the Plant Environment Committee
Managing Director

Engaged primarily in manufacturing technology and overseas planning. Appointed as president of ISPOL in 1997. Appointed as director in 1997. Appointed as executive director in 2000. Executive of the Manufacturing Division. Chairperson of the Plant Environment Committee. Appointed as managing director in 2001.

Efforts at the Plant Environment Committee

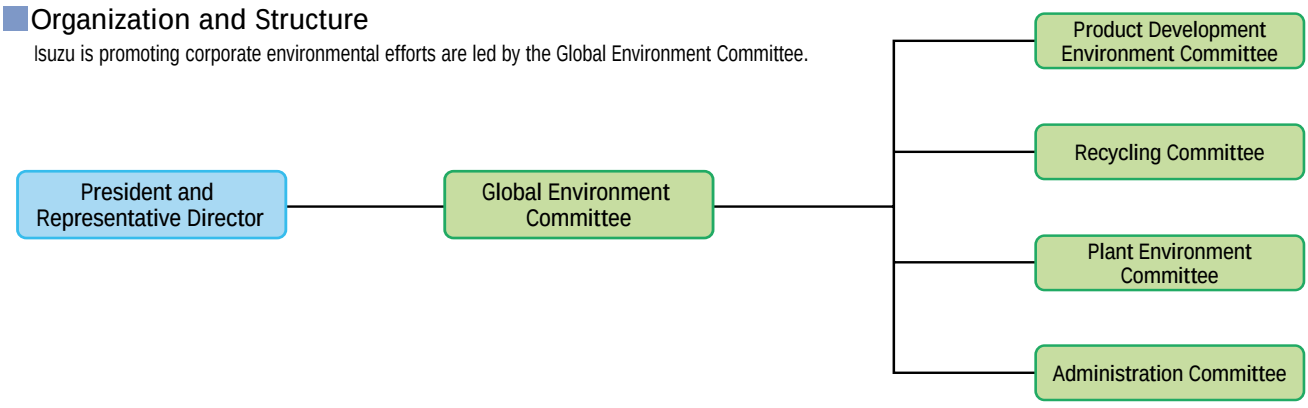
At the initiative of the Plant Environment Committee, our production division has coped with four major goals: (1) waste reduction, (2) reduction of regulated substances, (3) energy conservation, and (4) obtaining ISO 14001 certification. With the certification of the Tochigi Plant in March 2000, all four domestic plants have acquired ISO 14001 certification. During my presidency at Isuzu Motors Polska in Poland, we have introduced sophisticated environmental protection activities, including acquisition of ISO 14001 certification and green procurement. This concept is now applied to all of our overseas plants. In 2000, our employees have given top priority to achieve "zero emissions" for waste from our plants. We cleared the monthly goal in May 2001, and expect that the goal for the entire 2001 will be accomplished as well.

Eco-life Interview

I was a boating enthusiast during my university days. I was always amazed how great the nature was and how far it does with mankind. My sincere wish to leave beautiful environment for our children prompts me to environmental protection activities.

Organization and Structure

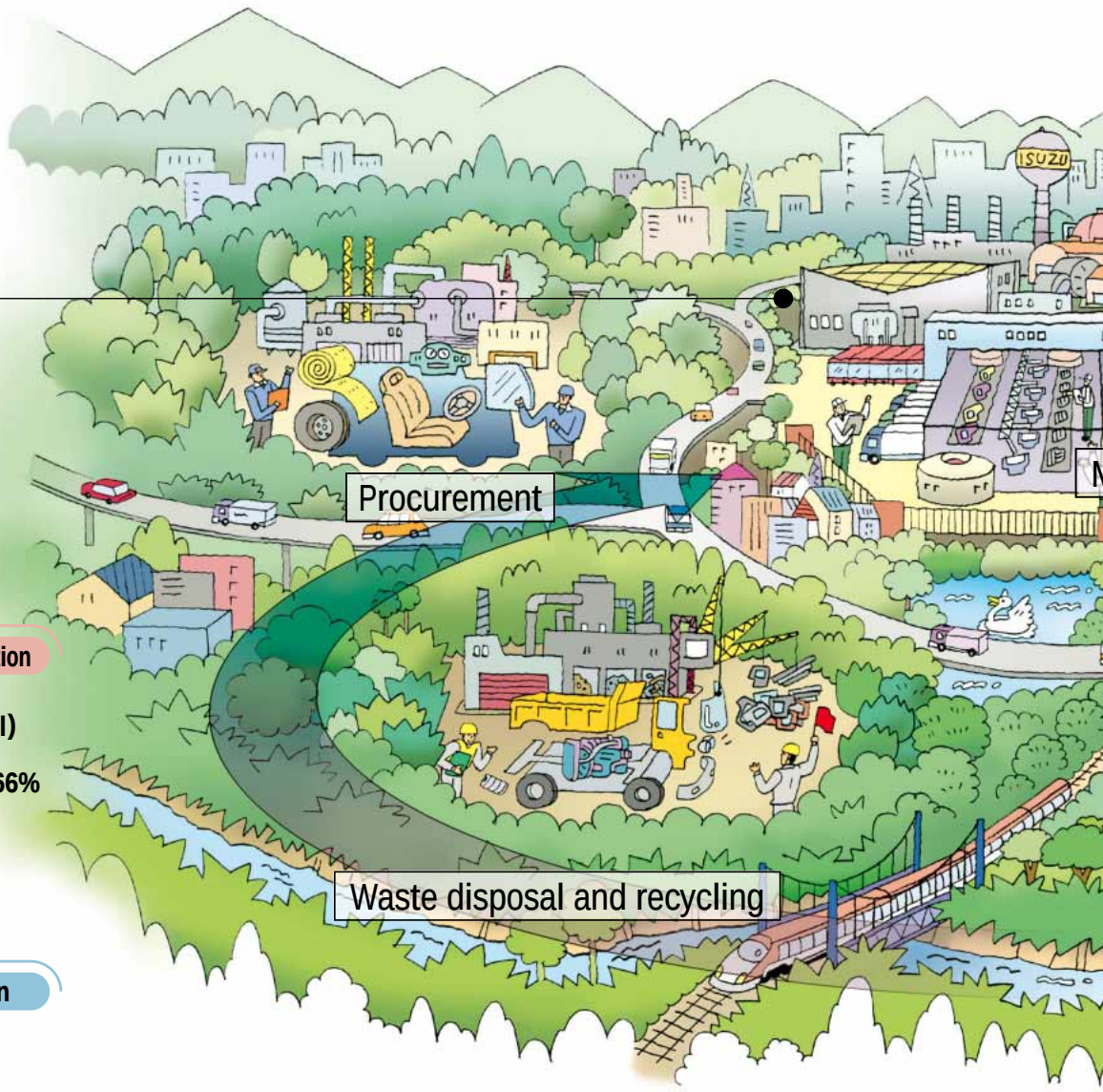
Isuzu is promoting corporate environmental efforts are led by the Global Environment Committee.



Isuzu's trucks and buses are essential to cargo and passenger transport. Our SUVs make your life enjoyable, and diesel engines are used in industrial machines, thus contributing to meeting social needs. However, vehicles have impact on various environments in the society from procurement, production, use, disposal and recycling. We realize that reducing such environmental impacts are our corporate responsibility.

We are making various efforts to minimize our environment impact. Such efforts include "green procurement" to choose more environmentally conscious materials, cogeneration systems to reduce CO_2 emissions, reduction of chemical substances as well as their appropriate control, the use of recycled wastewater for efficient use of water resources, and the promotion of "zero emissions" for industrial waste. In these efforts, we are reducing the impact with the specific target of values and timelines. In the offices, we have made day-to-day efforts to save resources, such as keeping the lights

INPUT



Total Energy Consumption

130,000 kℓ (based on crude oil)

- **Electric power 66%**
- **City Gas 20%**
- **Petroleum 14%**

Water Consumption

- **2,440,000 tons**

Material suppliers

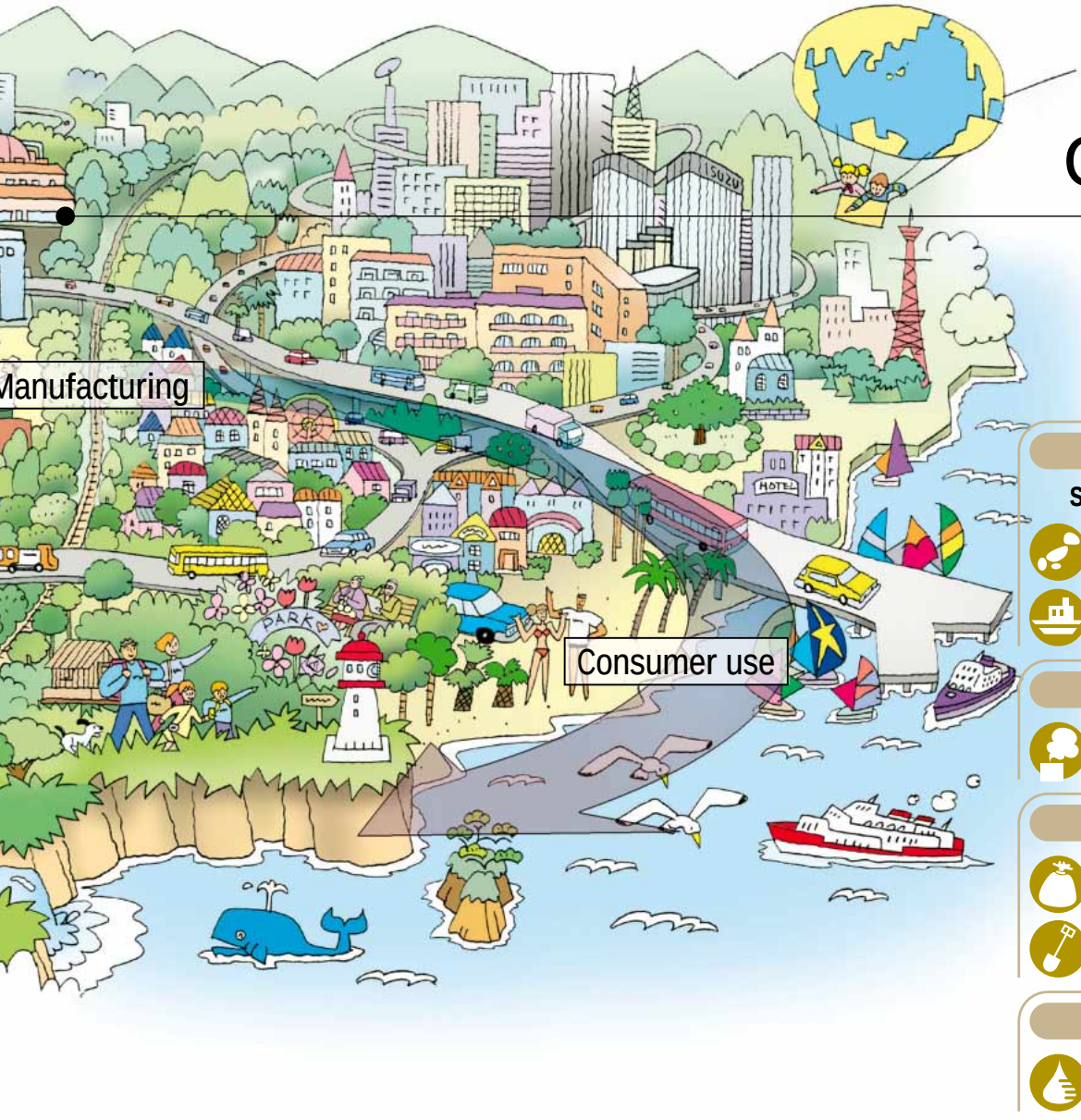
- **470 principal suppliers**

off during non-operating time, reuse of photocopy papers, and paperless documentation using PC.
Through the survey results on the environmental input and output from our business activities and continued improvement to reduce critical environmental impacts, we have constructed an environmental management system, and have promoted the ISO 14001 certification at our four domestic and overseas plants.

Diesel engines, Isuzu's major products, surpass gasoline engines in excellent durability and fuel economy, and high drivability due to its stable torque. Still, diesel engines need to improve its emissions for cleaner air. We have been doing our best in improving exhaust emissions with innovative technologies.

Domestic manufacturing sites: 4 plants

Employees in Japan: 12,597



OUTPUT

Products

Sales: ¥ 829.9 billion

Domestic sales
75,000 units

Export
170,000 units

Air

CO_2 emissions
230,000 tons

Waste

Total amount generated
66,000 tons

Landfill disposal
2,600 tons

Waste Water

Water discharge
2.44 million tons

2000 Environmental Protection Activities

Acquiring ISO 14001 Certification

Isuzu is promoting the acquisition of ISO 14001, the international standard for environmental management systems.

As a result, Isuzu Motors Polska in Poland and our engineering division of Isuzu Motors Ltd. obtained certification in December 2000 and June 2001, respectively. Now our major overseas plants and offices are establishing environmental management systems.

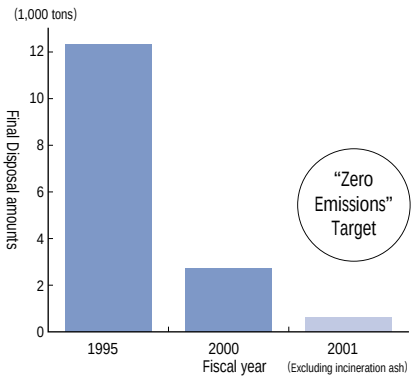
P09

"Zero Emissions" is Our Goal

We have already completed the acquisition of ISO 14001 at the four domestic plants in 2000. Now we give top priority in achieving "zero emissions" and have already cleared the monthly goal in May 2001.

P19

Results and Targets in Reducing Final Disposal



*1 One-way cooled EGR: An EGR system equipped with check valve and gas cooler

*2 CNG: Compressed Natural Gas

Introduction of Environmentally Friendly GIGA Series Heavy-duty Trucks

We have applied the one-way cooled EGR*1 system to the turbo-charged engines of the GIGA series. The GIGA heavy-duty truck series are environmentally conscious, incorporating the new system for improved fuel efficiency, reduced exhaust emissions and other advanced technologies.

Isuzu's heavy-duty trucks all comply with the current emission regulations in Japan.

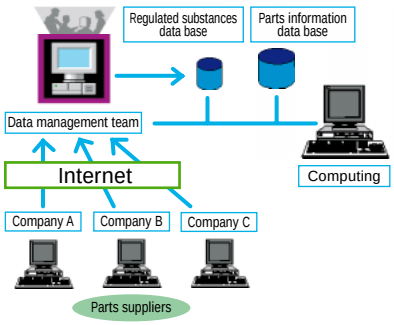
P17

Recycling Design Support System

Following last year's development of the Recycling Rate Computing System, we constructed the Regulated Substances Use Computing System for vehicles this year, which enables quantitative assessment of the regulated substances and their reduction.

P15

Recycling Design Support System



Procurement of Environmentally Conscious Parts and Materials

In November 2000, the "Green Procurement Guidelines" was released for our 230 suppliers to establish their own environmental management systems. We also ask them to submit data on the environmental pollutants in their parts and materials, and to replace or reduce regulated substances.

P10

Clean Energy Vehicles

We have also actively developed CNG*2-powered vehicles with dramatically reduced nitrogen oxides (NOx), particulate matter and black smoke. Our CNG truck sales jump every year; in 2000, we sold 743 units of the ELF light-duty truck series, which is approximately 70% of CNG-powered light-duty truck sales in Japan.

P14・P25

Improvement of Environmental Accounting in 2000

Environmental accounting is a good indicator for quantitative assessment of the cost and effectiveness of environmental conservation to reflect on corporate environmental activities and business activities. In 2000, we saved about ¥ 100 million by waste reduction, energy and water conservation for ¥ 26.4 billion of environmental cost.

P26

Cost (Unit:¥million)

Category	Amount
1. Costs within the business area	752
2. Costs of up / down streams	197
3. Costs of management activities	254
4. Costs of research and development activities	25,007
5. Costs of social activities	87
6. Costs of addressing environmental damage	76
Total	26,373

Cost Reduction (Unit:¥million)

Category	Amount
1. Cost reduction by energy conservation	106
2. Cost reduction in waste treatment	–4
3. Cost reduction in cutting consumption of tap water, sewage water and industrial water	17
Total	119

2000 Environmental Goals and Accomplishments

Environmental Goals	Performance in 2000
ISO 14001 certification for environmental management systems ●Isuzu Motors Polska (Poland) ●Isuzu Engineering Division	●Isuzu Motors Polska: December 2000 ●Engineering Division: June 2001
Improvement of fuel efficiency ●To improve fuel efficiency during the consumer use phase to reduce CO_2 emissions	●Fuel efficiency of the GIGA series heavy-duty trucks was improved by refining the low-speed torque characteristic of their engines, and adopting a direct-connection transmission ●Held Fuel Efficiency and Driving Safety seminars to help drivers reduce fuel consumption A total of 2,527 people from 1,135 companies participated
To clean up exhaust emissions ●To clean up exhaust emissions to meet the current exhaust emission regulations and next-term exhaust emission regulations for diesel engines in Japan	●Completed compliance with the current exhaust emission regulations ●GIGA series heavy-duty trucks and ERGA series large city/private buses
Clean energy vehicles ●Promotion of the clean energy vehicle development	●743 unit sales of ELF series CNG-powered light-duty trucks ●Launched the 2-3 ton class ELF series LPG*1-powered light-duty trucks
Improvement of recyclability ●To raise the recyclability of new vehicles to over 90% by 2002 as a voluntary target	●Dismantling research confirmed that the recyclability rate exceeded 90% for SUVs, pick-up trucks and light- and medium-duty trucks ●Sophistication of the recycling design support system (regulated substances computing system)
Reduction of lead ●1/2 or less of 1996 levels by 2000 ●1/3 or less of 1966 levels by 2005	●Reduced levels by 1/2 in the new 2000 models ●Achieved 1/3 or more reductions in some of the 2000 models
Reduction of air conditioning refrigerants ●To expand use of less-refrigerant air conditioners	●Reduced use in the ERGA large-size buses by 16% compared to the previous model ●Reduced use in the GIGA heavy-duty trucks by 23% compared to the previous model
Plant energy saving ●To improve energy efficiency to 1% per year (a source unit average) ●To control the level of CO_2 emissions to 1990 levels by 2000	●Increased 4% compared to the previous year (improved 23% compared to 1990) ●Reduced 46% over 1990
Reduction of plant waste ●To reduce final disposal by 70% compared to 1990 levels by 2000	●90% reduction compared to 1990 ●Promoted the new goal "zero emissions"
Streamline logistics ●To reduce lumbar in packaging materials ●To use 59% returnable materials and steel by 2000	●Achieved 62% returnable materials and steel in 2000 62%

*1 LPG:Liquefied Petroleum Gas

Establishment and Operation of the Environmental Management System

Isuzu has constructed an environmental management system to reduce the environmental impact of its business activities and to strengthen environmentally conscious corporate structure. With the Corporate Environmental Management Manual and Corporate Environmental Regulations for all of our four domestic plants, we are acting to unify the activities of each plant and its workers to enhance the environmental performance. An electronic document management system is adopted to facilitate the efficient preparation of documents and regulations. We also developed the database, "Environmental Management Room", on our intranet to exchange information concerning environmental protection efforts within and between the individual plants.

The "Environmental Management Room" on the Isuzu Intranet System

Plants and Divisions Acquiring ISO 14001 Certification

Name of plant or division	Date of Acquisition
Hokkaido Plant	May 1998
Subaru-Isuzu Automotive Inc. (USA)	November 1998
Kawasaki Plant	May 1995
Fujisawa Plant	September 1999
Tochigi Plant	March 2000
Isuzu Motors Polska Sp.z o.o.(Poland)	December 2000
Engineering Division	June 2001
Isuzu Engine Manufacturing Co., (Thailand) Ltd.	July 2001
Isuzu Motors Germany GmbH	August 2001
Isuzu Motors Co., (Thailand) Ltd.	April 2002(scheduled)
DMAX, Ltd. (USA)	June 2002(scheduled)

Possible emergency situations and risk management

We assume emergency situations that could have an impact on the environment and examine emergency procedures and measures in order to manage environment-related risks within the framework of our environmental management system. For example, we pick up common risks such as waste liquid leakage or environmental pollutants in plant rainwater drains, and other possible risks like accidents caused by charge/discharge of materials in the plant production processes. By assessing their impact, these risks are prioritized on how to control them. Isuzu plants regularly conduct training for emergency situations and response procedures, and emergency measures are consistently examined and improved.

Promotion of Environmental Audits

The purpose of environmental audit is to assess whether environmental management systems are properly operated to meet the requirements, and to revise them whenever necessary. Isuzu environmental audits comprise the internal environmental audits and the surveillance audits by an external certification organization. To enhance the self-audit capabilities of each plant, we are promoting internal environmental audits strictly and training internal environmental auditors. In addition, we started in 2000 to annually operate the Mutual Diagnostics between the ISO 14001 Plants, to share their strengths and solve the common issues.

Status of environmental audits

In the 2000 surveillance audits and internal environmental audits, there were no major suggestions. However, several minor improvements were immediately taken to correspond to the suggestions. Mutual diagnostics revealed twenty-one excellent efforts by the plants. Such efforts include "Environmental News" to raise workers' awareness and KAIZEN initiatives to reduce environmental impact. Also, there were fifteen issues to be improved; discrepancy of operation procedure manual and the operation. In response, we are trying to share the excellent efforts and the common problems to solve. This year, the twenty-five internal environmental auditors were officially registered, which makes 257 auditors in total.

Compliance with Environmental Laws and Regulations

Isuzu is working hard to reduce the environmental impact of our business activities by voluntarily establishing stricter standards than national and regional regulations. We hold plant environmental committees on regular basis to confirm compliance with legal regulations and the daily maintenance. In 2000, Isuzu is completely in compliance with all the environmental regulations.

Product Recalls for Environmental Reasons

In 2000, there were no environmentally related recalls. We have one environmentally-related lawsuit under trial, on the health effects of exhaust emissions.

Environmentally Conscious Products

Concept of Life Cycle Assessment (LCA)

Vehicle Development with Reduced Environmental Impact Throughout Their Life

As heavy-duty commercial vehicles usually record one million kilometer drive during their lifetime, fuel efficiency could result in significant differences in total energy consumption and CO_2 emissions. From the viewpoint of life cycle assessment (LCA), diesel-powered vehicles could help keep global warming under control with their less CO_2 emissions.

Commercial vehicles are also advantageous in the disposal phase for their excellent recyclability. Another major challenge is the reduction of nitrogen oxides (NOx), particulate matter (PM) and black smoke in exhaust gas. In addition to our efforts to reduce these emissions by improving combustion systems, we will devote ourselves to achieve further reductions by engine innovations. We are positively developing environment-friendly vehicles by various approaches based on the concept of LCA, such as further noise reduction, use of environment-friendly materials, and reduction of refrigerants in air conditioners.

Environmentally Conscious Products such as Diesel-powered Vehicles

- Improving fuel efficiency and reducing CO_2 emissions
- Less exhaust emissions
- Clean energy vehicles
- Less external noise
- Less substances with environmental impact
- Improved recyclability
- Reducing refrigerants in air-conditioners

Environmentally Conscious Product Development Support Systems

System for assessing the environmental and social effects during its entire lifecycle

Design support system for reducing the environmental impact

Chemical substance management system for reducing the substances in products that have environmental impact

Green Procurement

Promotion of Green Procurement

In November 2000, the "Isuzu Green Procurement Guidelines" were released to facilitate our cooperative and comprehensive efforts with our suppliers to reduce environmental impact. More specifically, we will establish an environmental management system for the procurement phase by adapting less harmful materials and parts from environmentally conscious suppliers.

To accomplish this goal, we have selected about 230 suppliers and asked them to obtain ISO 14001 certification, or to establish and operate an environmental management system equivalent to ISO 14001 by the end of 2003. Our suppliers are also requested to submit data on the substances with environmental impact that are used in the parts and materials, and to replace or reduce regulated substances.

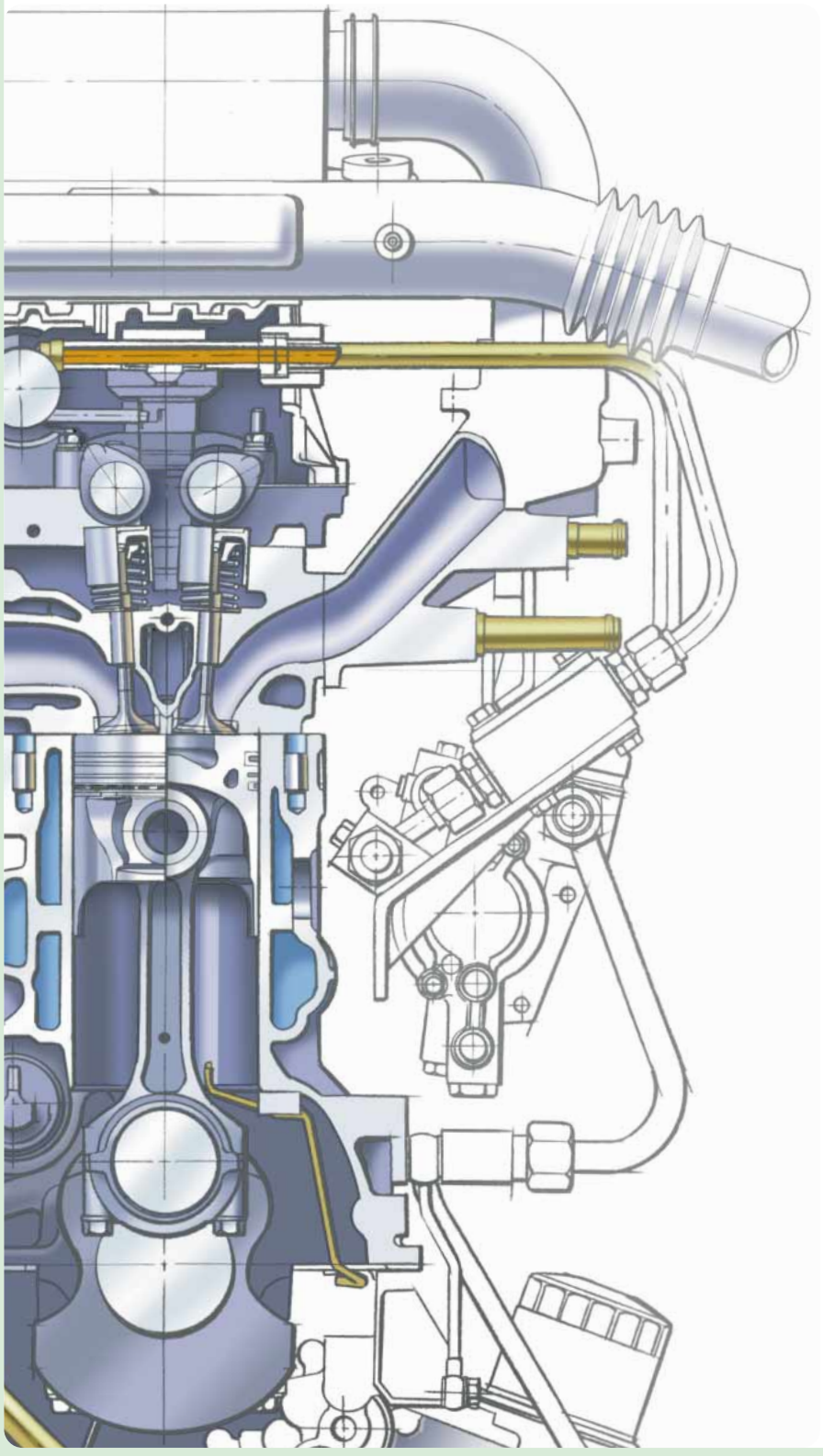
In addition, we disclose information on green purchasing (preference given to environmentally conscious products) via the Green Purchasing Network's Automobile Environment Databook.

"Isuzu Green Procurement Guidelines"

Advanced Diesel Technology

Technology

It is our mission to prove the excellent features of diesel engines. Isuzu is making every effort to develop further efficient and cleaner diesel engines.



Developing next-generation diesel engines with our advanced technology and expertise.

Diesel engines are advantageous to gasoline engines in various aspects, including better fuel economy, longer driving distance and durability, and lower CO_2 emissions. To be the world's number one diesel manufacturer, Isuzu is developing technologies to enhance the advantages of diesels and clean exhaust emissions with its original expertise.

For example, our engines for SUVs have realized a combination of driving pleasure and low pollution and fuel consumption by electronic control. The DOHC direct injection system and the common-rail high pressure fuel injection with a maximum of 140 MPa optimizes the combustion condition with the assistance of an EGR (exhaust gas recirculation). For commercial vehicles, we have developed ultra light and super fuel-efficient engines equipped with an intercooler turbo charger for heavy-duty trucks. An electronically controlled common rail high-pressure fuel injection system and a one-way cooled EGR enable us to create diesels with high economic efficiency and low environmental impact.

We Keep on Challenging as a Diesel Pioneer

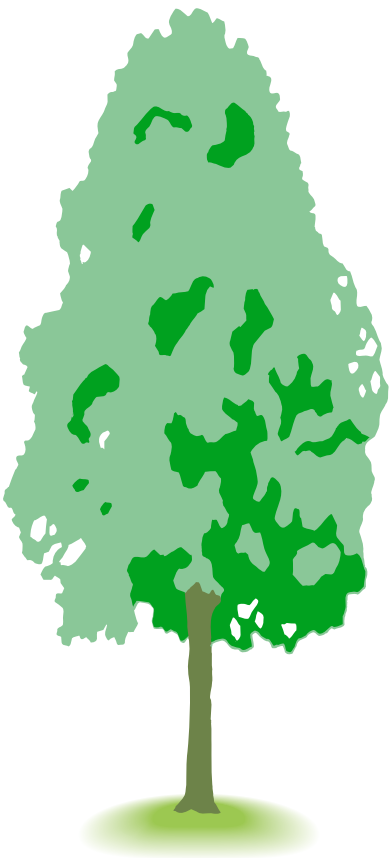
Our top priority in developing clean diesels is the simultaneous reduction of NOx, particulate matter and black smoke. To accomplish this goal, we are working on a precision control technology for more than one injection in 0.01 second at a fuel injection pressure exceeding 200 MPa. By bringing EGR systems, continuous regeneration DPF (diesel particulate filter) systems and NOx catalysts into practical application as well as the precision control technology, diesel engines could be more environmentally friendly than gasoline engines. It is Isuzu's goal and commitment to continuously make innovations for the future of diesel engines.

Photographs of Diesel Combustion Phases

Common-rail high pressure fuel injection system

Conventional fuel injection system

V6 engine with common-rail fuel injection system



Interview

The performance of a diesel engine is evaluated on exhaust emissions, fuel efficiency, and if the reliability and comfort meet the conditions of its use. We have the technical capabilities of developing fuel-efficient diesel engines with low exhaust emissions. At the 1999 Frankfurt Motor Show, Adam Opel presented a 3-liter car which can drive 100 km with 3 liters of fuel, and gained high reputation for its excellent drivability and comfort as well as its fuel efficiency. This car was mounted with an Isuzu's 1.7-liter diesel.

We are working hard to clean exhaust emissions further by refining the combustion and after treatment technology. We always keep our eyes on protection of the global environment and continue to work on creating excellent products that meet the needs of the coming age.

Toshio Ichimasa

Group Leader of Engine Engineering Dept. No. 2, Powertrain Engineering No. 2

Engaged in engine performance experimentation, then shifted to design work. In charge of designing diesel engines for passenger vehicles for the EU market.

Interview

In Japan, some people say that diesel engine is the major cause of air pollution. In the EU countries where people are highly environment conscious, however, diesel engines have been well appreciated and increased the sales remarkably. This fact illustrates that diesel engines fail to get comprehensive understanding in Japan. With their high thermal efficiency and low CO_2 emissions, diesel engines have the potential to prevent global warming. Smooth acceleration and deceleration can even reduce particulate matter and black smoke by half or more. The diesel engines that comply with the current emission regulations are by far cleaner than the conventional diesel engines. On a long-term basis, regulations have already been established to significantly reduce particulate matter in exhaust emissions, which will result in far cleaner emissions. It should be noted, however, that more than half of the vehicles on roads were manufactured before the particulate matter regulations were enforced. As long as these vehicles emitting black smoke are on roads, it is necessary to monitor and regulate them strictly.

I believe the environmental impact of diesel engines will be significantly reduced, especially in urban areas, as we will soon develop advanced engine combustion technology and low-sulfur fuels after-treatment systems, as well as hybrid diesel-powdered vehicles. I expect Isuzu to contribute to prevent global warming and develop ultra low-pollution vehicles through its world-leading technologies.

Ryoji Kihara

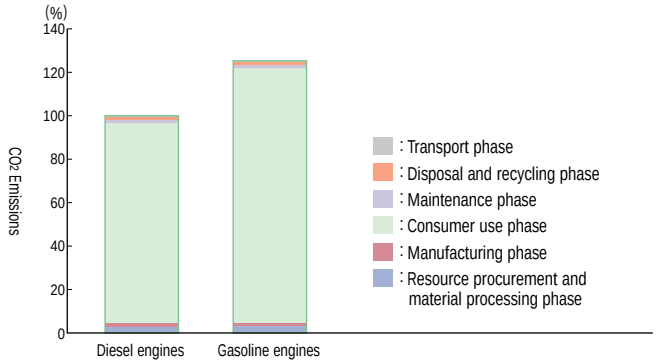
Ex-visiting professor, Waseda University

Improving Fuel Efficiency and Reducing CO_2 Emissions

With the efficiency in converting fuels into driving power, diesel engines can cut CO_2 emissions by 20-40% as compared to gasoline engines. Another advantage is their high durability. Diesel-powered vehicles can travel more than one million kilometers during their lifetime. Diesel engines are thus most suitable to commercial vehicles, which require both good fuel economy and durability.

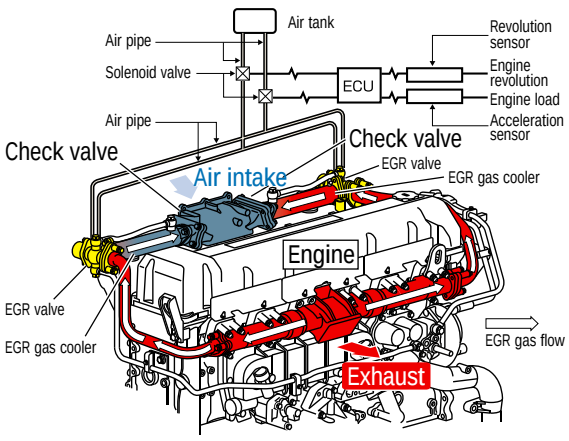
However, as diesel uses fossil fuel, the engines unavoidably emit CO_2, the major cause of global warming. Isuzu is improving not only engine combustion efficiency but also fuel efficiency of the vehicle as a package. The Isuzu SUV series are already complied with the domestic 2005 fuel efficiency regulations for diesel-powered vehicles. For the GIGA series heavy-duty trucks, we have achieved driving at low rpm by improving direct-injection engine combustion efficiency with an intercooler turbo charger, and lowering the engine rotation rate and increasing the torque, which resulted in a remarkable fuel efficiency improvement by 13% compared to the conventional model (in-house measurement).

Comparison of Lifetime CO_2 Emissions between Diesel Engines and Gasoline Engines



1) Data on a 2-ton payload ELF series light-duty truck traveling 30,000 km (Source: driving test at Isuzu's sales office in Tokyo).
2) Lifetime CO2 emissions from diesel engines are taken as 100%.

Diagram of the One-way Cooled EGR System



Cleaner Exhaust Emissions

Isuzu is critically committed to improve the diesel exhaust emissions. For more stringent exhaust emission regulations to come, Isuzu is making every effort to develop technologies that minimize exhaust emissions.

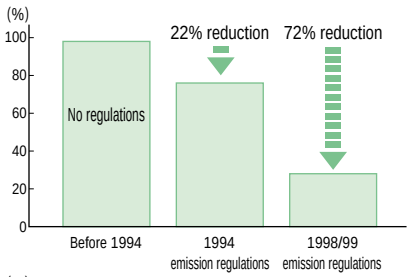
In response to the long-term emission regulations for medium- and heavy-duty diesel-powered vehicles enforced in 1998/99, we have successfully reduced NOx and particulate matter to one-fourth and one-third of the previous levels by applying state-of-the-art technologies, such as an electronically controlled common rail high-pressure fuel injection system and a one-way cooled EGR.

In addition, we have introduced a ceramic fiber DPF system*1, a post-treatment that reduces particulate matter and black smoke emissions from vehicles, to the market on monitoring basis.

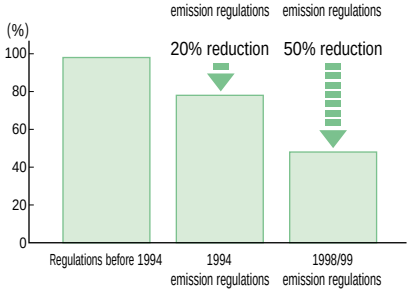
Now we are working on the development of a continuous regeneration DPF with a catalyst to significantly reduce particulate matter and black smoke emissions.

*1 DPF (diesel particulate filter) system: A system to trap particulate matter and black smoke by a ceramic fiber filter and to incinerate them by a heater

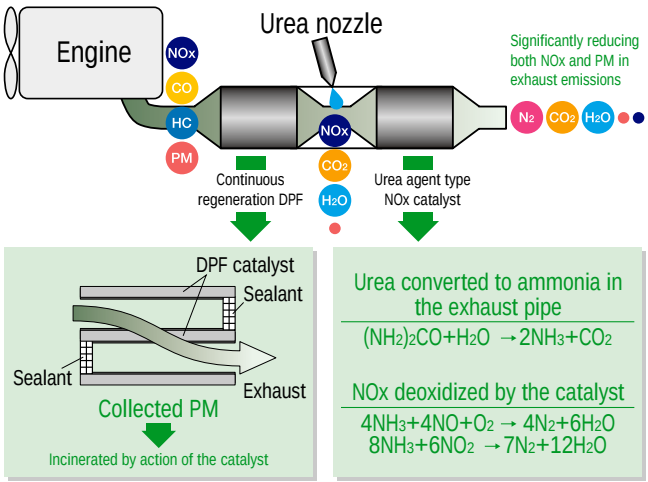
PM Reduction Trend



Black Smoke Reduction Trend



Combination of Continuous Regeneration DPF and NOx Catalyst (Urea Agent Type)



Development and Marketing of Clean Energy Vehicles

Isuzu actively investigate and develop various alternative-energy vehicles to seek solutions for dwindling petroleum resources and air pollution in large cities. We have already put CNG*1-powered trucks and buses and LPG*2-powered trucks in the domestic market.

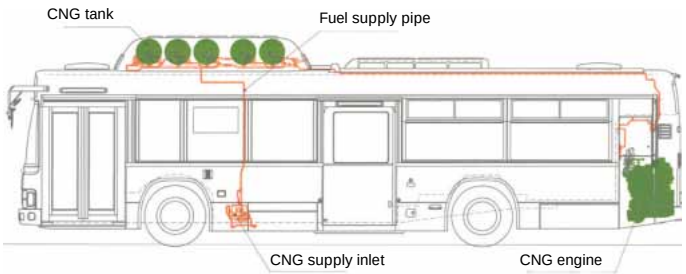
CNG- and LPG-powered vehicles emit significantly less particulate matter and black smoke but LPG vehicles include much CO_2 in its emissions. We are also developing diesel-electric hybrid ELF light-duty trucks. This is a next-generation clean energy vehicle featuring advantages of electric vehicles with the excellent fuel efficiency of diesel engines.

*1 CNG: Compressed natural gas
*2 LPG: Liquefied petroleum gas

CNG-powered Vehicles (Line up in compliance with the Green Purchasing Law)

	Type	Model	Number of models	Maximum loading payload or seating capacity	Engine	Displacement (cc)
Commercial Vehicles	ELF	KK-N*R	7	2000 — 4000 kg	4HF1	4,334
	FORWARD	KK-F*R	8	4050 — 7600 kg	6HA1	8,226
Buses	GALA mio	KK-L*R	1	52 persons	6HA1	8,226
	ERGA	KK-LV	2 1	56 — 61 persons 70 persons	8PF1 6HA1	15,201 8,226

Layout of CNG-powered Vehicle



ELF Hybrid Light-duty Truck (prototype)

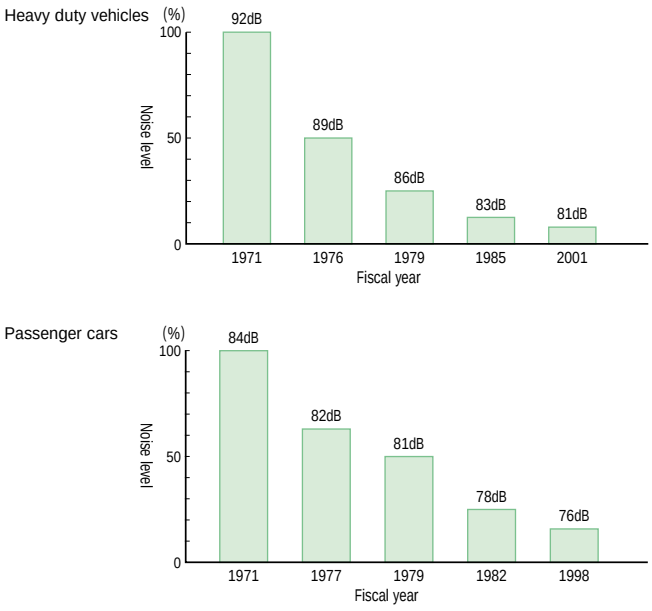
Other Environmental Measures: Noise Reduction and Use of Less-refrigerant Air-conditioners

The following are other examples of our technical innovations to reduce the environmental impact throughout the life cycle of each vehicle.

External Noise Reduction

In Japan, under the world's most stringent noise regulations, Isuzu is most conscious about noise in designing its products. Our efforts to develop less noisy vehicles include, a pilot fuel injection system to reduce both noise and exhaust emissions and analyzing the combustion sound transmission pathway.

Regulations on Acceleration Running Noise



Reducing Substances that Impact the Environment

There has been a worldwide trend to curtail the use of substances that have environmental impact.

Isuzu has taken actions to reduce or abolish the use of regulated substances, such as lead and hexavalent chromium, in accordance with the 1998 Voluntary Action Plan for Recycling Vehicles.

Reduction of Refrigerants in Air-conditioners

In 1993, we completely switched the use of specified CFC12 refrigerants which destroy the ozone layer to HFC134a, an alternative CFC refrigerant. As alternative CFC refrigerants are also subject to be controlled as greenhouse gases. Accordingly, we have reduced 23% and 16% of alternative CFC in the 1999 GIGA series heavy-duty trucks and ERGA series large buses, respectively.

Concept of Vehicle Recycling

The EU Directive Concerning End-of-Life Vehicles was issued in October 2000, calling for limitations of the regulated substance use in vehicles and accomplishments of numerical recycling targets. In Japan, the Automobile Recycling Law is to be issued in 2002. With this background, automobile manufacturers play increasingly important roles to deal with the End-of-Life vehicles. Aiming at a company supporting the recycling-based-society, Isuzu is actively improving recycling technology prior to the Law in force. Furthermore, we will continue our extensive cooperation with environment-related industries and other industrial sectors.

Outline of voluntary action plan

Based on the Voluntary Action Plan for improving recyclability, Isuzu has set a goal of "improving new vehicle recyclability rates to over 90%*1 in 2002 and after."

*1 Calculated by Isuzu's standards on weight basis.

Category	Item	Current Status
Improvement of new vehicle recyclability	Improve recyclability rates to over 90% by 2002 and beyond	-Achieved recyclability rates of over 90% for SUVs, pickup trucks, and light- and medium-duty trucks as of 2000 -Figures for heavy-duty trucks and large buses are under study
	Expanding the use of materials suitable for recycling	-PP*2 plastic used on the spacer under the ELF wooden cargo bed/PP used on outside door handles (completed) -PP used on grip hinge of over 4-ton payload trucks (completed) -PP used as base material for SUV roof (completed)
	Simplifying dismantling and sorting	-Dismantling vehicles for positive research on easier dismantling and feedback
	Improving the recyclability of wooden cargo beds of trucks	-Replaced wooden cargo beds with iron based material starting with the ELF 1999 model
	Decreasing the use of lead	-Reduced lead use by 1/2 in new 2000 models (completed) -Reduced lead use to 1/3 in some models
	Improving airbag disposal processing	-Colored all harness covers and protective covers yellow (completed) -Eliminated use of sodium azide (completed)
Handling of vehicles already sold or in continuous production	Technological development and communication	-Developed application technology of recyclable material to air dam core of 1-ton pickup trucks (completed)
	Expanded use of recycled products	-Developed rubber fenders using recycled material (completed)
	Promotion of proper processing	-System construction for collecting specified fluorocarbons and substitute fluorocarbons (completed) -Published Airbag Processing Manual for distributors (completed) -Published manifest implementation requirements for distributors (completed)

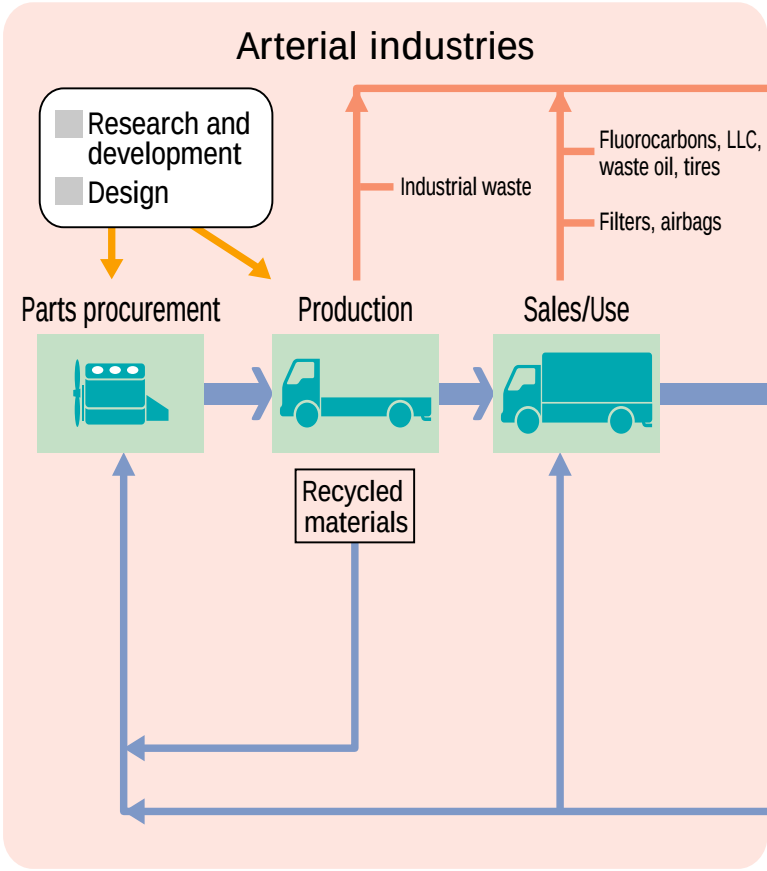
*2 Polypropylene

Recycling Efforts in the Research and Development Phase

- Positive research on vehicle dismantling -

For minimal environmental impact throughout the product life cycle, efficient recycling and component reuse of end-of-use vehicles, we need to take them into considerations in the design phase. To improve vehicle recyclability, workability and economy, and to reduce environmental impact, Isuzu has been making feedback of data obtained through vehicle dismantling to the design division.

To date, we have created a database for four models on the results of these studies. The database for the GIGA heavy-duty trucks and buses is still under development.

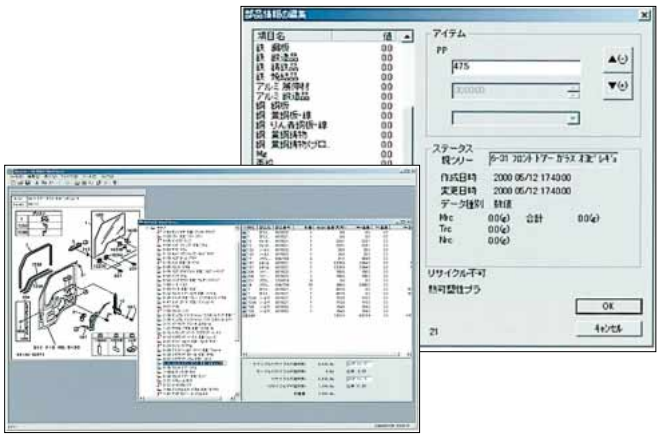


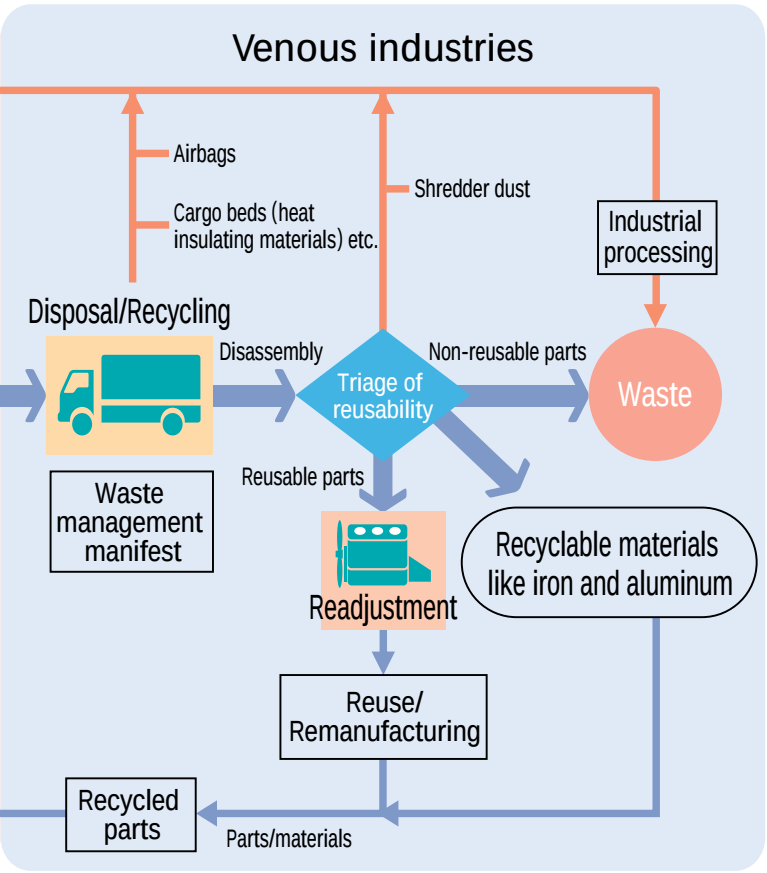
Recycling Efforts in the Design and Manufacturing Phases

- Recycling design support system -

We are improving our recycling design support system and creating databases to facilitate the accurate assessment of vehicle recycling rates and regulated substance contents in the design and manufacturing phases. This support system enables us to analyze data by vehicle and by equipment, which is useful in designing of recyclable vehicles.

Recycling Design Support Data





Vehicle Lifecycle

Recycling Efforts in the End-of-Use Phase

- Reuse and remanufacture -

To promote the reuse of parts of end-of-use vehicles, our domestic Sales Division is linked with the domestic distributors through an intranet called "Remani (Remanufacturing) Net". On this network, we exchange information concerning unnecessary parts in dealer stock and reusable parts for their efficient use.

There are various items on the net ranging from remanufactured diesel engines to powertrain components. In the age of the recycling-based society, there should be increasing demand for such parts and components.

Before Remanufacturing

After Remanufacturing

Recycling Efforts in the Disposal Phase

- Manifest system -

As of December 1998, the revised Waste Management and Public Cleaning Law, requests us to manage all the industrial waste with an industrial waste management form, or "manifest," from discharge to final disposal.

In compliance with this system, we have promoted the appropriate waste treatment by distributing the Manifest Manual to all of our domestic dealers. Isuzu U-max Co., Ltd. , an Isuzu's subsidiary for used vehicle sales, and the distributors' used vehicle sales divisions prepare the manifest system for each vehicle to be dismantled to follow the vehicle to the end of dismantling.

I n t e r v i e w

Promoting the Vehicle Design System for Easier Dismantling and Recycling

I have been engaged in vehicle dismantling studies to obtain data for efficient recycling. I am collecting data from each model and creating a database on whether vehicles are easy to dismantle, on whether removed parts and materials have the identification, and on whether the materials are recyclable.

If the dismantling process is not easy, it might be dumped, even if recyclable materials are used. The key to efficient recycling depends on the vehicle's simplicity of dismantling. Since the design drawings can not tell the dismantlability, we need to break up each vehicle by hand into parts to confirm the workability. The data compiled through these studies are fed back to the engineering division to facilitate the vehicle design considering their dismantling and recycling. I will conduct further investigations to suggest readily reusable parts and body structures, thus contributing to the development of excellently recyclable vehicles.

Nobuhisa Okuda

After material development at Isuzu Central Laboratories Co., Ltd., Okuda has been engaged in studies of vehicle recyclability and dismantlability. He says, "I feel I have witnessed the long history of vehicle development through my efforts on new concept of recycling. I will do my best so that I could even change the history of vehicles."

Developing Vehicles That Have Less Environmental Impact

Keeping pace with the motorization, vehicles have enhanced their environmental performance, as well as driving and safety performance to meet the changing demands of society. In recent years, with the increasing demand for environmental conservation, we are improving environmental impact caused by vehicles with cutting-edge technologies.

1959 Model of ELF Light-duty Truck Series

BU Series Bus in the 1950s

Isuzu GIGA series : Environmentally friendly trucks

The GIGA heavy-duty truck series have been improved to be more environment-friendly, as well as to enhance their basic performance, safety and reliability. Focusing on reducing the total life cycle cost, we have developed the trucks based on extensive investigations with the following goals:

1) Cutting exhaust emissions
2) Improving fuel efficiency
3) Improving loading capacity
4) Improving reliability
5) Improving safety
6) Improving serviceability

We did own best to cut exhaust emissions and improve fuel efficiency, and have accomplished the goal by introducing the world's first one-way cooled EGR system for a turbo-charged engine, and improving the low-speed torque. We have achieved a remarkable improvement of 13% of fuel efficiency compared to conventional model (in-house measurements), and significant reductions of NOx, particulate matter and black smoke to comply with the 1999 emissions regulations.

Isuzu ERGA Bus series : Friendly to people, environment and operators

In 2000, we underwent the first full scale change in large city/private buses since 1984, and launched the new bus series as "ERGA". The ERGA series, and other models, comply with the 1999 emissions regulations. In addition, from the viewpoint of the user's welfare and universal design, the new floor adjustment device and the sloping step were added to help elder and handicapped passengers for easier access.

We also launched a CNG-powered city buses with zero particulate matter and reduced CO2 emissions. An idling stop and start system is optionally available to further enhance the environmental performance.

Sport-utility vehicles : BIGHORN, WIZARD and MU

As a result of progress in computer processing, optimization of combustion timing, and an improvement of the catalyst, the gasoline-powered models of our sport-utility vehicles BIGHORN, WIZARD and MU have cleared a 25% reduction required by the 2000 emission regulations based on the qualified low-pollution vehicles. In addition, we have adopted an "ion sensing apparatus" for the first time in the world, to prevent abnormal combustion and exhaust emissions to enable quicker and more accurate engine control.

Isuzu ELF Light Duty Truck series

Various measures of reducing their overall environmental impact have been adopted for the ELF series. In addition to the engine improvements such as four intake and exhaust valves for more efficient combustion of fuel and cooled EGR system to clean exhaust emissions, the ELF trucks have been improved to reduce their environmental impact throughout their life cycle by increasing their recyclability and extending the life of the engine. An EGR system and an oxidation catalyst*1 were available in combination in several models to purify exhaust emissions to levels that comply with the Low Emission Vehicle Approval system by the seven Tokyo-area prefectural and municipal governments including the Tokyo Metropolitan Government.

In addition to the diesel-powered models, clean energy vehicles such as CNG- and LPG-powered have been added to the lineup of the ELF series to meet the needs of our customers.

*1 Oxidation catalyst: A catalyst that oxidizes uncombusted fuel and hydrocarbons (HC) contained in particulate matter and hence purifies exhaust gas.

"Dual Mode MT" System

The Dual Mode MT is a system that enables the driver to select two clutch-operating modes: clutch-free mode and manual mode. It features the combination of the high fuel efficiency of manual transmissions and the drivability of automatic transmissions.

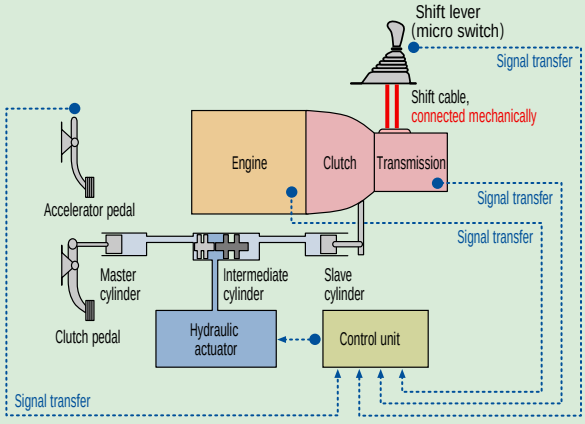
In the clutch-free mode, you can drive just by operating the shift lever and accelerator pedal so clutch operation is unnecessary.

In addition, the Dual Mode MT has a standard equipment of idling stop system (the engine stops automatically when the driver is to leave the vehicle) to improve fuel economy and emissions.

Mechanism of the Dual Mode MT

Easy and Comfortable Driving by Automatic Clutching

In the Dual Mode MT, clutching is automatically optimized on engine revolution rate and vehicle speed as the driver operates the shift lever and accelerator pedal. Its mechanism is simple in that a hydraulic actuator or automatic clutching mechanism is added to an ordinary manual transmission system. Difficult half-clutching is automatically and smoothly achieved by the hydraulic system. The Dual Mode MT includes a fail-safe system to allow the driver to operate the clutch as usual in case of a mechanism failure. Safety is ensured as well as comfortable driving.



GIGA Heavy-duty Truck Series

ERGA CNG-powered Non-step Bus Series

CNG tank mounted on the roof to help people get on and off the Non-step Bus

WIZARD Sport-utility Vehicle

ELF LPG-powered Light-dutyTruck Series

ELF CNG-powered Light-duty Truck Series

Challenging for Environmentally Sound Plants

Our Challenge to Create Environmentally Sound Plants

Among the various processes of vehicle life cycle, manufacturing may have serious impact to local communities and to the earth, which we feel very critical. Isuzu is striving to minimize such impact of with the aim of "Creating Environmentally Sound Plants That Are Open to Their Communities".

The 2000 goals of environmental conservation in our domestic plants include "zero emissions" efforts (zero volumes of the final waste that goes into landfills) for the recycling-based-society, as well as promotion of energy conservation to continuously suppress global warming, and implementation of a comprehensive program to comply with the PRTR Law*1, including chemical substance management and its reduction. We are also promoting environment-friendly production in compliance with national and regional regulations in consideration of the environments, including air, water, noise, vibration and soil, bolstering environmental communications with the local community, and enhancing our partnership with both domestic and overseas dealers, affiliates and suppliers. For effective environmental conservation, Isuzu has constructed environmental management systems for all the domestic plants as well as our major overseas plants. We started to annually operate the mutual diagnostic system at the four domestic plants upon completion of ISO 14001 certification, aiming at the plants to share their strengths for continuous improvement.

*1 PRTR Law: Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management

Environmentally Sound Plants That Are Open to Their Communities

- Waste reduction
- Energy conservation
- Management and reduction of substances with environmental impact
- Air pollution and water contamination preventions and legal compliance
- Effective use of resources

Waste Reduction

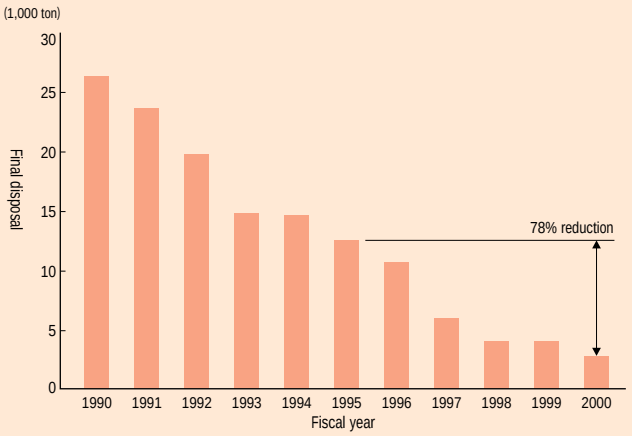
Aiming at Zero Emissions for Industrial Waste in 2001

Isuzu has highlighted industrial waste reduction as one of the most important environmental conservation activities in our plants. Starting with resource recycling by total waste classification control, we have constructed an efficient production system to minimize waste and to facilitate the aggressive use of recovered materials. With these activities, we are continuously reducing landfill waste with the aim of achieving "zero emissions"*2 for industrial waste. In May 2001, we cleared the monthly goal.

*2 "Zero Emissions" means "A reduction of end waste amount to 95% of the 1995 level (excluding incineration ash)" for Isuzu.

Recycling Center

Final Disposal Amounts from all plants



In 2000, the final disposal amount was reduced by 78% vs 1995 level and by 90% vs 1990 level.

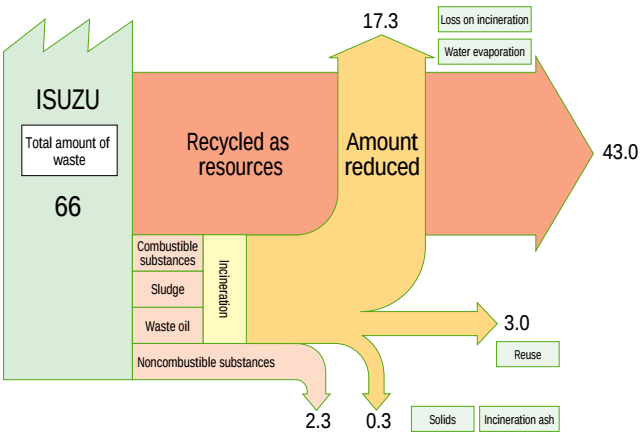
Waste Reduction

Reducing Waste and Increasing Recycled Resources

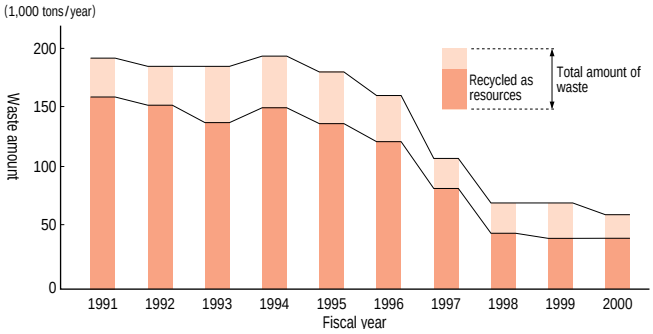
The breakdown of the waste generated at our plants in 2000 shows that most of the landfill wastes were incombustible substances such as sludge solids, incineration ash and waste plastics. We are making efforts to reduce landfill waste by cutting total waste volumes and taking measures in accordance with individual material through material recycling and heat recovery by thermal recycling.

Our plants have set goals for "zero emissions" and are working to extensively improve the manufacturing processes along with environmental management programs. To reduce waste amounts, we have replaced wooden pallets with returnable steel at Kawasaki Plant. At the Fujisawa Plant, we are adopting returnable delivery cases, reducing partition materials and cushions for packing, and improving the manufacturing process to reduce faulty products to be disposed of. At the Hokkaido Plant, we are making efforts to increase recycled resources, polishing dust and sludge. At the Tochigi Plant, integration of cutting lubricant has led to its reuse as a result of improved oil-water separation and filtering accuracy for waste liquids. In addition, each plant has a recycling center to promote complete waste classification and to increase the recyclability of potentially reusable waste under disassembly/classification control of composite waste.

Waste Treatment and Disposal (in 2000) (Unit : 1,000 tons/year)



Total Amount of Waste and Recycled Resources

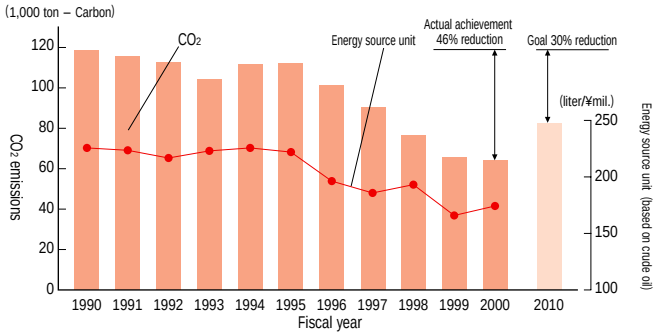


Energy Conservation

Energy Consumption and Its Reduction

We set our target at the plants to reduce energy consumption using CO_2 as an index to curb global warming and to facilitate the efficient use of resources. Our efforts in 2000 include "improvement of cogeneration efficiency" in Fujisawa Plant, "removal of the black smoke incineration heater in dust collector" in Kawasaki Plant and "recovery of boiler heat" in Tochigi Plant, which resulted in a 1.3% reduction of CO_2 emissions as compared to the previous year. We are also constructing an energy saving production system at each plant under "Guideline for Energy Conservation Design and Management" to provide standards for energy conservation and waste heat utilization for new equipment under "Medium- and Long-term Energy Conservation Plan".

Actual CO_2 Emissions



By energy saving activities and process integration, we cleared in advance the 2010 goal of reducing CO_2 emissions due to energy use.

Reduction of Substances with Environmental Impact

There have been nationwide trends for reducing the chemical substances that have major environmental impact. Isuzu has constructed an environmental management system complying with the PRTR Law to reduce the risks of environmental pollution and damage caused by such substances, and is working to control the substances covered by the law and to disclose information to the public. Within the environmental management system, we have established the "Management Regulations on Regulated Substances" and obtained MSDS*1 for all regulated substances used at our plants, to compile data on the subject substances and to reduce regulated substances and replace them. In 2000, we totally abolished the use of dichloromethane as a cleansing agent in the heat treatment and as a masking cleaner in the resin coating. We are going to reduce the xylene, toluene and other solvents that are now largely discharged.

*1 MSDS: Material Safety Data Sheet

Results of the 2000 PRTR Compliance Survey (Unit : tons)

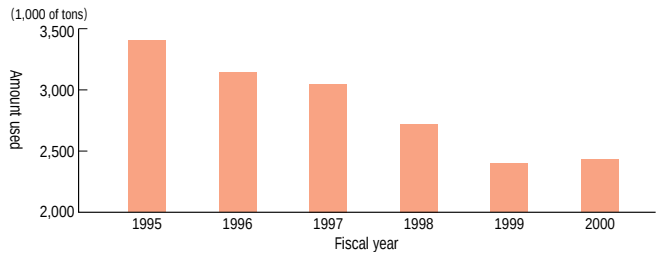
Substance	Major use	Amount handled	Amount discharged
Xylene	Paints/thinners	854.6	689.5
Toluene	Paints/thinners	337.0	177.0
Bisphenol A	Paints	5.1	0.0
Dichloromethane	Cleaning agents	12.9	5.7
Lead compounds	Electroplating primer fluids	12.7	0.5
Zinc compounds	Chemical processing agents	11.9	0.8
Nickel compounds	Chemical processing agents	2.7	1.8
Manganese compounds	Chemical processing agents	5.7	2.0
Fluorine compounds	Chemical processing agents	3.9	3.0
Ethylbenzene	Gasoline	21.7	0.1
Benzene	Gasoline	11.2	0.1
Ethylene glycol	Refrigerants	1010.0	16.2
Monoethanolamine	Cleaning agents	7.9	0.0
Poly-oxyethyl	Cutting lubricant	1.8	1.8

Effective Use of Resources

(1) We spare no efforts to ensure the effective use of resources and we have achieved our target in each plant to reduce the use of cutting lubricant, hydraulic fluid, cleansing agents, paper resources, etc. Waste cutting lubricant, in particular, has been disposed as industrial waste in a mixture of various fluids. As a result of fluid integration, we succeeded in making this waste fluid reusable. Thus, we have both reduced waste liquid and conserved resources.

(2) We are also working on water conservation. We make constant efforts in campaigns such as "water conservation", "convert air conditioners to air-cooler systems", and "save water by lowering the supply pressure".

Water Resource Usage (Total Amount)

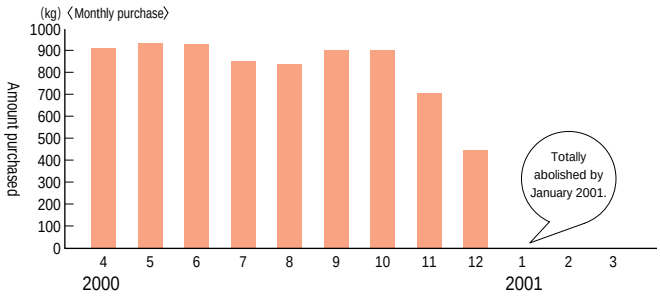


Air and Water Pollution Prevention

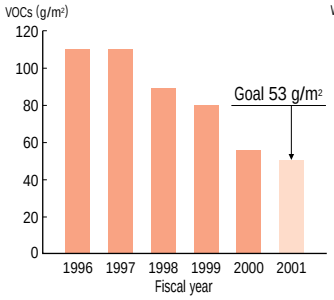
To prevent air and water pollution, comprehensive measures are taken to reduce substances that have environmental impact. We are reducing air pollutants such as sulfur oxides (SOx) and nitrogen oxides (NOx) by improvements of the boiler fuels and other combustion facilities. As for VOCs*2, their total emissions were reduced in 2000 by abolishing the use of dichloromethane and increasing the recovery of cleansing thinner waste in the painting process. In addition, our efforts to improve water quality have led to improvements in COD*3 in the wastewater from our plants.

*2 VOCs: Volatile Organic Compounds
*3 COD: Chemical Oxygen Demand

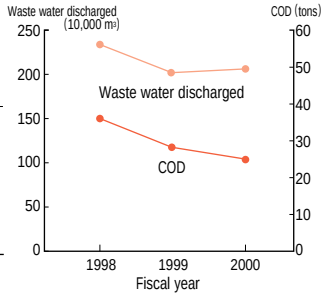
Amount of Dichloromethane Purchased



Use of VOCs in the Painting Process



Amounts of Waste Water Discharged and COD



Accidents and Complaints

In 2000, we had no environment-related accident, penalties or fines. There were five complaints from local residents of our plants: two at the Fujisawa Plant and three at the Kawasaki Plant. The complaints against the Fujisawa Plant were malodor due to incomplete combustion and littering, and those against the Kawasaki Plant were all concerning noise generated during midnight to morning. Our response was to promptly and sincerely account to the local residents for remedial actions, a change of the fuel, employee education, and limiting operating time.

Activities in the Fujisawa Plant

This report features the Fujisawa Plant, which manufactures light and medium-duty trucks and SUVs.

Fujisawa Plant

Land area	886,781 m²
Greened area	155,635 m³

Before Waste Boxes

After New Recycling Station

Voluntary Cleaning Activity on the Shonan Enoshima Coast

Air Quality

Actual Measurement

Item	Equipment	Regulation value	Highest	Average
NOx (ppm)	Boiler	125	110	86
	Oil heater	125	92	75
	Cogeneration system	50	35	30
	Incinerator	150	85	76
Dust and soot (mg/Nm³)	Boiler	100	77	28
	Oil heater	300	26	13
	Cogeneration system	50	≤1	≤1
	Incinerator	100	96	93
SOx (Nm₃/h)	(Regulation on total value)	21.82	1.7	0.9

Water Quality

Actual Measurement

Item	Regulation value	Highest	Lowest	Average
pH	5.8~8.6	8.6	7.1	7.7
COD (mg/l)	60	24.0	5.0	13.8
BOD (mg/l)	60	22.0	5.0	10.7
SS (mg/l)	90	20.0	≤5.0	≤5.0
Oil content (mg/l)	5	2.5	≤1.0	≤1.0
Copper content (mg/l)	3	≤0.3	≤0.3	≤0.3
Zinc content (mg/l)	3	≤0.3	≤0.3	≤0.3
Soluble iron content (mg/dl)	10	≤0.5	≤0.5	≤0.5

	Description	Responding actions
Complaints	Malodor on west of tennis court	Incomplete combustion of heavy oil was the cause of odor. The fuel was replaced with gas on the day of the complaint.
	Littering near the south gate	Leaflet and caution sign for employees
Accidents	None	

Interview

As Fujisawa is a very large plant, there had been differences in environmental conservation efforts among manufacturing, development, and administration divisions. Accordingly, we established the Recycling Implementation Committee and the Energy Saving Committee, consisting of all the divisions, and made efforts to make all employees more environment-conscious with the goal, "Fujisawa Plant where Recycling Mind Prevails" for two years following the obtainment of ISO 14001 certification in September 1999. As a result, we accomplished more than expected improvements in terms of energy and resource conservation such as cleaning oil, hydraulic fluid and paper. At the same time, the employees' increased consciousness about legal compliance led to an improvement of their environmental management.

Regarding efforts to achieve the company-wide goal of "zero emissions" for waste, we removed all giant waste collection boxes outdoors. Instead we established a handmade recycling station at each workplace to classify 22 kinds of waste and have promoted waste classification control and recycling at the initiative of each workplace. In addition, the "Difficult to Classify" box was made to accommodate waste that is difficult to disassemble or classify. Such waste is handled by a newly established recycling center. Through these activities, the Fujisawa Plant significantly reduced the final landfill waste to 22 tons/month as of the end of 2000 (about 100 tons/month as of end of 1999). We will continue these activities to achieve "zero emission" goal by the end of 2001.

We also communicate with the local residents and regularly have plant tours for them. Although we received a complaint from local residents near our plant on littering by employee, we always try to increase the employee awareness through voluntary cleaning around the plant, railway stations and the Shonan Enoshima Coast.

Tadaharu Matsuo

Plant Manager, Fujisawa Plant

Primarily engaged in manufacturing control, construction of production systems for plants, and production planning. Appointed as vice-executive of the Kawasaki Plant in 1995. Appointed as executive of the Tochigi Plant. Appointed as president of Isuzu Motors Co., (Thailand) Ltd. (IMCT) and president of Isuzu Engine Manufacturing Co., (Thailand) Ltd. (IEMT) in 1999. Took active parts in a broad range of situations, both privately and officially, as president of the leading commercial vehicle manufacturer in Thailand. Appointed as executive of the Fujisawa Plant (in charge of vehicle manufacturing).

Environmental Data by Plant

Following are the air/water quality data and their comparison to the regulations.

Hokkaido Plant

Land area 1,480,744 m²
Greened area 62,154 m³

The Hokkaido Plant started its operation in 1984. It is located in the huge Tomakomai East Industrial Site. This plant plays a central role in producing small high-performance engines, including diesel engines for the European and American markets. Constant efforts are made to reduce environmental impact, including abolishment of the percolation process, which conventionally employed a manganese compound.

Air Quality

Actual Measurement

Item	Equipment	Regulation value	Highest	Average
NOx (Nm³/h)	GUH (15 units)	Regulation on total value 6.3	1.11	0.062
	Boilers (2 units)			
	Nitrided heat-treated furnace (1 unit)			
Dust and soot (kg/h)	GUH (15 units)	Regulation on total value 3.5	0.078	0.004
	Boilers (2 units)			
	Nitrided heat-treated furnace (1 unit)			
SOx (Nm³/h)	(Regulation on total value)	2.6	0.004	≤0.001

Water Quality

Actual Measurement

Item	Regulation value	Highest	Lowest	Average
pH	6~8	7.5	6.4	7.1
COD (mg/l)	50	25.5	3.2	17.5
BOD (mg/l)	50	9.1	≤0.5	1.3
SS (mg/l)	50	8.0	1.0	2.3
Oil content (mg/l)	4	0.8	≤0.5	0.5

Complaints	None
Accidents	None

Tochigi Plant

Land area 1,154,185 m²
Greened area 126,272 m³

The Tochigi Plant was established in 1972. Its duties are machining of driving system parts for all of our vehicle models, mainly wheel axle assembly, and production of engines for light-duty trucks. By separating machining chips in cutting water on the basis of the principle of "shishiodoshi" (bamboo faucet found in traditional Japanese gardens), significant results were obtained in the reduction of cutting fluid consumption and prevention of site contamination.

Air Quality

Actual Measurement

Item	Equipment	Regulation value	Highest	Average
NOx (ppm)	Boiler	230.0	96.0	80.3
	Metal oven	200.0	140.0	140.0
	Incinerator	Not applicable	66.0	62.5
Dust and soot (mg/Nm³)	Boiler	250.0	16.0	8.0
	Metal oven	200.0	17.0	11.0
	Boiler	250.0	97.0	97.0

Water Quality

Actual Measurement

Item	Regulation value	Highest	Lowest	Average
pH	5.8~8.6	7.5	7.1	7.3
COD (mg/l)	Max 25, average 20	13.0	4.9	8.8
BOD (mg/l)	Max 25, average 20	8.2	0.9	4.1
SS (mg/l)	Max 25, average 20	7.0	≤1.0	3.0
Oil content (mg/l)	5	≤1.0	≤1.0	≤1.0
Copper content (mg/l)	3	≤0.05	≤0.05	≤0.05
Zinc content (mg/l)	5	0.33	≤0.05	0.15
Soluble iron content (mg/dl)	3	0.29	≤0.05	0.12

Complaints	None
Accidents	None

Kawasaki Plant

Land area 367,829 m²
Greened area 20,806 m³

Starting its operation in 1938, the Kawasaki Plant has a longest history as Isuzu Plant, located in the Keihin Industrial Belt. Close to a residential area, and as our only base for production of heavy-duty trucks and their engines, the plant is making efforts to reduce the environmental impact of its business activities, including noise reduction and incinerator abolishment.

Air Quality

Actual Measurement

Item	Equipment	Regulation value	Highest	Average
NOx (ppm)	Boiler	150	87	70
	Unit heater	200	97	93
	Oven	200	67	54
Dust and soot (mg/Nm³)	Boiler	100	1	1
	Unit heater	200	8	5
	Oven	200	42	27
SOx (Nm³/h)	(Regulation on total value)	2.8	0.06	0.03

Water Quality

Actual Measurement

Item	Regulation value	Highest	Lowest	Average
pH	5.8~8.6	7.7	6.4	6.9
COD (mg/l)	60	14.0	2.2	6.0
BOD (mg/l)	60	6.7	5.0	5.1
SS (mg/l)	90	11	≤5.0	7.6
Oil content (mg/l)	5	1.5	≤1.0	≤1.0
Copper content (mg/l)	3	≤0.05	≤0.05	≤0.05
Zinc content (mg/l)	3	≤0.01	≤0.01	≤0.01
Soluble iron content	10	≤0.05	≤0.05	≤0.05

	Description	Responding actions
Complaints	Idling noise from supplier vehicles in early morning	1. Parking at designated area was prohibited. 2. Idling was prohibited.
	Sanding noise in midnight	Noisy operation time was limited to 18:00.
	Pumping noise at waste water treatment station No. 7 in midnight	Pump operation time was limited (operation ceased between 19:00 and 8:00).
Accidents	None	

Notes: 1. Data for FY2000 (April 2000 - March 2001).
2. Standards shown are the strictest among those stipulated by the environmental laws, ordinances, or pollution prevention agreements.
3. COD: Chemical Oxygen Demand BOD: Biochemical Oxygen Demand SS: Density of Suspended Matter in Water

Logistics/Distribution/Environmental Accounting

Logistics

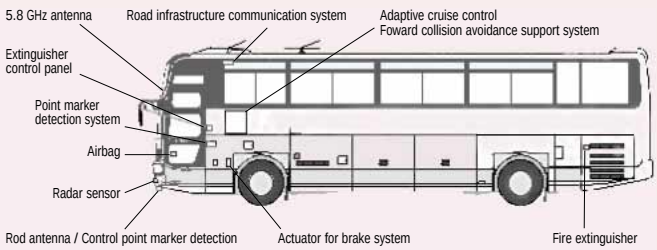
Development of a New Transportation System

Improvement in vehicles cannot satisfactorily reduce the environmental impact caused by vehicles throughout their lifetime. The currently available transportation and logistics systems must be examined and improved.

In 1997, Isuzu set up a special division to promote technological innovations for a sophisticated, next-generation transportation system, including the ITS*1 system to avoid traffic jams and assuring safety by confirming the geographic position of a vehicle via a multipurpose satellite, ASV*2 as recipients of information from the ITS system, and the AHS*3 project for linking vehicles with roads via telecommunications. In November 2000, we presented our developments at the "Smart Cruise 2000" project sponsored by the Ministry of Land, Infrastructure and Transport.

*1 ITS: Intelligent Transport System
*2 ASV: Advanced Safety Vehicle
*3 AHS: Advanced Cruise-assist Highway System (Isuzu is the only commercial vehicle manufacturer that participates in the AHS Association.)

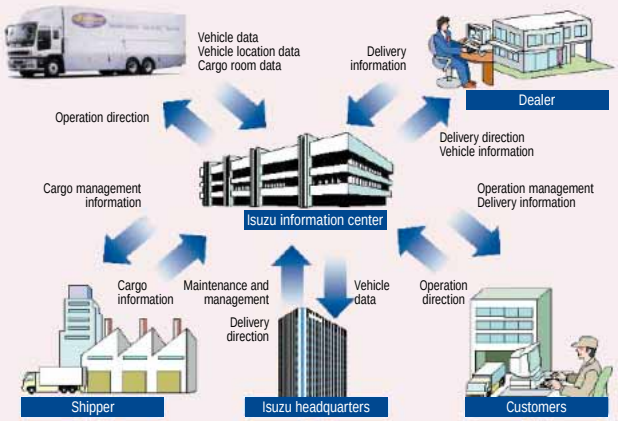
Major Equipment in the GALA Bus that Participated in the "Smart Cruise 2000" Project



Development of a Logistics Support System

For efficient logistics, it is effective to constantly monitor the latest traffic information and the status of cargo transport. Isuzu has realized information transmission between its logistics information center and moving cargo trucks by GIGATS logistics support system which is already on the market. In addition, the next-generation GIGATS monitoring has already begun. It would link moving vehicles to a transportation center via Internet and other most advanced telecommunications technologies, and make it possible to exchange information in real time. This would more efficiently manage traffic, and avoid useless driving and have more fuel-efficient driving, thus contributing to reducing the environmental impact.

Network Image

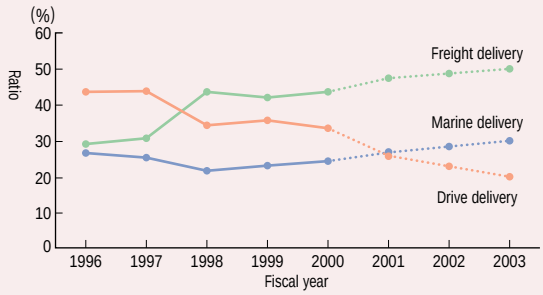


Integrating Products and Procurement Logistics

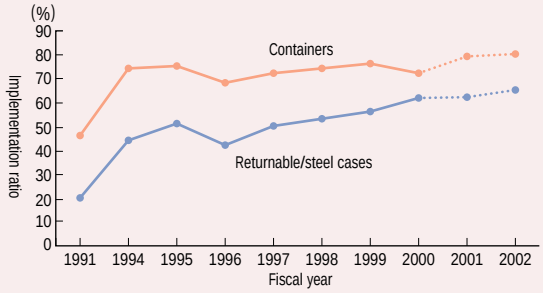
To reduce the emissions and energy consumption in the process of vehicle shipment, our transportation mode is being shifted from the conventional "drive delivery" to "freight delivery" on vehicle carriers and "marine delivery". We aim to standardize marine transport by establishing new maritime transportation routes and bolstering our delivery schedule management. We will promote efficient freight transport to supplement maritime delivery by developing a vehicle carrier capable of shipping smaller quantities from light-duty to medium-duty vehicles.

With regard to the transport of parts for overseas production, we are reducing the use of lumber-based products in packaging and packing materials. In 2000, we have made 8,000 reusable in-container steel cases to achieve a 100% shift to returnable cases for our engine plant in Poland. In 2000, we accomplished a percentage for returnable or steel cases of 62%, well over the target level of 59%. We will further increase our use of steel cases and to shift to container shipments for China.

Domestic Vehicle Transport



Packaging Materials



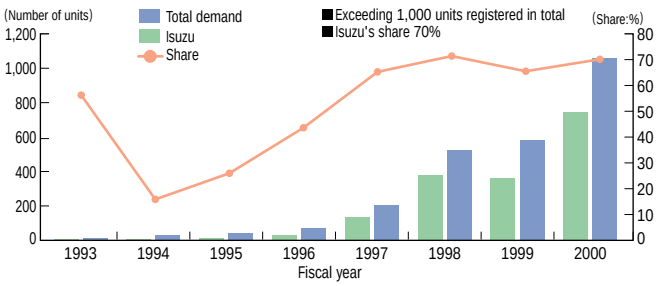
Environmentally Conscious Distribution and Services

We cannot accomplish our goals of reducing vehicle-related environmental impact and efficiently using limited resources without the consistent efforts through vehicle manufacture, use, disposal and reuse process. To deliver products of less environmental impact to our customers, and for long and safe use and proper disposal, it is important to conduct environmentally conscious sales and service activities. Isuzu provides various supports for its distributors to facilitate environmentally conscious activities.

Expanding clean energy vehicles

As environment-friendly vehicles, not only diesel-powered low pollution vehicles but also CNG-powered vehicles have drawn customers' attention for city transport. Isuzu has commenced the line production of the CNG-powered ELF series in response to the increased demand and have enhanced its line-up and marketability by introducing cutting-edge technologies, thus steadily increased its sales.

Registration of ELF CNG-powered Vehicles



Proper disposal of substances with environmental impact

Vehicles employ various substances that have environmental impact, such as engine oils, fluorocarbons and substitute fluorocarbons from air conditioners and batteries. To assure distributors that these substances are properly disposed, we have issued a manual for dismantling vehicles and properly treating these substances (left).

Constructing remanufacturing system for engine electrical appliances

Isuzu has made researches on remanufacturing systems and parts quality. In March 2001, in cooperation with an electrical appliance supplier we began to market remanufactured starters and generators that are equivalent to new products in terms of performance and reliability at lower costs.

Fuel efficient driving

To help our customers select the most fuel-efficient model, Isuzu has developed "Nenpi-DAS" software for simulation of fuel efficiency by traveling route and vehicle type on the basis of domestic and overseas road data. Other customer supports include the Economy & Safety Driving Sessions. This year, a total of 2,527 customers participated in the events and learned how to save fuel, extend vehicle's life span and drive safely (Total number of participants: 15,320).

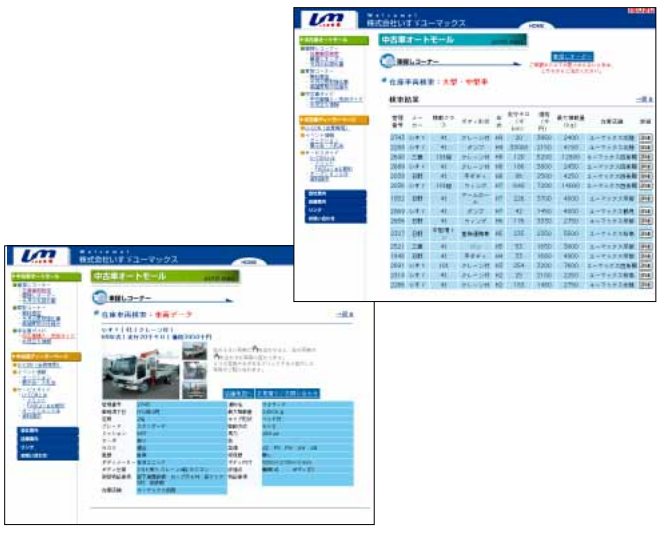
Recovery of fluorocarbons

By 1993, we had totally discontinued the use of the specified fluorocarbon CFC12, a chemical substance used as a vehicle air-conditioner refrigerant that will destroy the ozone layer. A recovery device is available at every dealer to facilitate the recovery of the specified fluorocarbon in used air-conditioners to prevent global warming. We are also collecting the substitute fluorocarbon HFC134a as a greenhouse gas.

Activities towards a recycling-based society

-Web promotion of vehicle reuse -

Reuse of vehicles is essential for the realization of a recycling-based-society. Isuzu established Isuzu U-Max Ltd., the used car distributor, and has promoted the reuse of vehicles. Isuzu U-max is the first company in Japan to trade used commercial vehicles by the Internet.



Environmental Accounting for 2000

Quantitative data on environmental conservation costs and their effects, environmental accounting is an important indicator to promote environmental conservation activities effectively. Isuzu has adopted environmental accounting for better information disclosure of our environmental conservation activities and for the assistance of management decisions concerning the accomplishment of environmental conservation objectives and goals set by the environmental management system.

In September 1999, an environmental accounting working group was established and we are improving our environmental accounting and disclosure system since then. This year, we started comprehending the effects by the figures of "energy conservation", "amount of waste" and "amount of tap/sewage/industrial water" as the reliable data of the manufacturing process. This report presents actual material and monetary figures of reductions from the previous year. Our energy conservation activities saved us 100 million yen. In waste disposal, we reduced 1,400 tons, but the cost increased slightly. This additional cost is accounted for by a rise in disposal fees and expenses for recycling. As a next step, we will improve the accuracy of environmental accounting, the coverage on effects, and information disclosure.

Environmental Conservation Cost

(Unit : ¥ million)

	Category	Description of major efforts	Amount
1	Business-area cost : Environmental conservation costs within the business area ・Pollution prevention cost ・Global environmental conservation cost ・Resources circulation cost	 Total investment for dichloromethane Introduction of cogeneration system to the Hokkaido Plant Investment for waste disposal and zero-emission efforts	 104 78 570
2	Upstream/downstream cost : Environmental conservation costs in the upstream and downstream production processes	Dismantling research Purchasing of returnable racks	197
3	Management activities cost : Environmental conservation costs of management activities	ISO 14001 certification, environmental education, personnel costs	254
4	R & D cost : Environmental conservation costs of research and development activities	Research and development of products with reduced environmental impact	25,007
5	Social activities cost : Environmental conservation costs of social activities	Social contributions, support of environmental conservation activities	87
6	Environmental damage cost: Costs of environmental damage	Reserves for environmental conservation, litigation costs	76
Total environmental conservation costs			26,373

Cost Reduction Effects (vs. previous year)

(Unit : ¥ million)

Cost reduction by energy conservation	106
Reduction in waste treatment cost	–4
Reduction in tap water, sewage water and industrial water consumption	17
Total	119

Quantitative Reduction Effects (vs. previous year)

(Unit : tons)

CO_2 emissions	5,000
Amount of waste disposed	1,400
Amount of tap water, sewage water and industrial water used	8,400

Community/Social Relations

Safety and Health at Workplaces/Employee Education

Safety and Health

Basic policy: Creating safe and comfortable workplace


わが社の安全衛生理念
安全は全ての人の協力で作り上げるものです。
一、きれいで明るい職場にしましょう
二、災害は予測して退治しましょう
三、自ら進んで健康づくりに努めましょう

Isuzu aims for a safe and comfortable workplace on the policy "Safety is Assured with Everybody's Collaboration" (left). With the goals of "Preventing Labor Accidents, Traffic Accidents and Fires", "Improve the Working Environment" and "Promoting Health", we are focusing on preventive measures. We are, in particular, striving to prevent labor accidents by learning from case studies and safety awareness promotion.

Safety management for plant operation staff

Our efforts to prevent labor accidents include an enhanced educational program for plant operation staff using a safety management manual for "field operations by manufacturing staff." At operation sites, it is important that both the manager and staff are conscious about safety and confirm the situation by their own eyes and bodies. For this purpose, we have made efforts to improve safety management and staff awareness using the manual for specific matters, including safety wears, protective devices, operator qualification and prohibited field works.

Prevention of labor accidents	
-Increasing safety awareness	: Implementation of KYT*1 education program (thorough training for risk prediction)
-Improving manufacturing facilities	: Enhancement of safety measures for automated production systems
Thorough prevention of recurrent accidents	: Prevention of accidents by reviewing similar case reports and increasing operator awareness
Improving the workplace environment	: Creation of workplace friendly to elderly and female employees
Promoting mental and physical health	: Promotion of mental health, medical check and health guidance programs
Others	: Prevention of fires and traffic accidents

*1 KYT: Kiken Yochi Training (training for risk prediction)

Total Health Promotion

To ensure a positive life for employees, as well as to activate their workplace and to prevent labor accidents, we are implementing the "Total Health Promotion" plan. Specifically, our efforts include lecture meetings on "mental health" by case studies, instructions to prevent lifestyle-related disease, including the change of their dietary life, and physical strengthening programs such as instructions on physical exercises. At the Fujisawa Plant, the "Fujisawa THP 35" program is held for 35-year-old employees, who play the leading role at the plant. This program resulted in improving awareness of the employees.


Mental Health Seminar


Healthy Cooking Seminar

Environmental Education and Raising Awareness for Employees

Environmental education programs for employees

Isuzu is actively promoting basic training on environmental issues, Isuzu's environmental conservation policy and efforts in order to increase employee's awareness. We also provide special education on ISO 14001 environmental management systems in our production division. Other efforts include the publication of Environmental News, the Environmental Initiative Campaign, control of waste, and recovery of used paper.

For the proper understanding of diesel engine mechanism, features and environmental issues, our company newsletter "Isuzu Shimbun" had "Diesel Seminar" with fancy illustrations from August 1999 to May 2000. In the environmental month edition in June, the newsletter had a special report on the examples of environmental conservation activities to increase employees' awareness.

Company Newsletter "Isuzu Shimbun"

Contributions to Society through Business Activities

Support for South Pole observation expeditions

Isuzu has kept dispatching diesel engineers to support the South Pole observation expeditions from the first expedition in 1956 to the 42nd this year. In Antarctica, Isuzu has contributed to observations for ozone layer depletion, global warming and environmental changes by providing our engineers and power generators with cogeneration system, snowmobile engines and trucks.

Wintering Team Members from Isuzu


Snowmobile Powered by Isuzu Diesel

Tochigi Plant cooperates with the local welfare center

The Tochigi Plant has continuously been collecting aluminum cans for the "Fureaikan" welfare center, where handicapped people work to crush recovered aluminum cans as the rehabilitation program based on occupational therapy, and they welcome our contribution. Crashed cans are supplied to a recycling center as recycled resources.


"Fureaikan" Welfare Center

Isuzu's trucks supported the Olympic Games in Sydney

At the 2000 Olympic Games in Sydney, we offered more than 60 trucks to support the sacred-fire relay, luggage transport, support car maintenance service and transport throughout Australia.

Event Sponsorship and Participation

We presented our products in the Eco-Products 2000 Fair in December 2000 with our own theme "For Sustaining the Future of the Earth….Isuzu's Clean Diesels Will Meet the Demand". We also participated in a total of other 17 events, including the Low-Pollution Vehicle Fair, the International Environmental Expo, and the People and Auto Technology Expo. In addition, seminars and workshop meetings were held for national government officers, media, the public and our customers to increase their understanding of our environmental conservation efforts.

Eco-Products 2000 Fair

DPF Symposium

Diesel Symposium Sponsored by the Chinese Automobile Technology Association

The People and Auto Technology Expo

The 34th Tokyo Motor Show

Environment-related Awards in 2000

Award	Subject
"Grand Prize" and "Transportation Minister's Award" in the Eco-Driving Support Component Division from the ECOMO Foundation for Promoting Personal Mobility and Ecological Transportation	Idling stop & start system for buses
German *Auto Und Sport's* "Five Stars in Overall Evaluation"	Opel Astra ECO4 equipped with Y17DT(4EE2) diesel engine
"Championship" in the Marathon Division of the 2000 World Solar Bicycles Rally	Solar car equipped with electric double-layer capacitor (under development by CCR, our affiliate)
Award of Showing Remarkable Improvement of Information Disclosure contest, sponsored by the Security Analysts Association of Japan	Judge praized plant tours, meetings for diesel engines and other technical information
US *Popular Science's* "Best of What's New" Award	Duramax 6600(8GF1) diesel engine
US *Popular Science's* "Grand prix" in the Automobile Division	GM's hybrid car Precept equipped with 1.3 L diesel engine (fuel efficiency 90 miles/gallon accomplished)
"Encouragement Prize" in the 17th Kanagawa Industrial Technological Development Contest	Isuzu diesel particulate filter
US *Ward's* "Ten Best Engines Award"	Duramax 6600(8GF1) diesel engine
US *Motor Trends'* "Truck of the Year" Award	GM's Chevrolet Silverado HD equipped with Duramax 6600 diesel
German *Mot's* "Grand Prize" in the Small Cars Division of the Diesel Vehicles Ranking by Class	Opel Corsa equipped with 4EE2 diesel
German *Mot's* "Grand Prize" in the Compact Cars Division of the Diesel Vehicles Ranking by Classs	Opel Astra ECO4 equipped with 4EE2 diesel

Environmental Communication

Information Disclosure

Regular disclosure by environmental reports

As Japan's first commercial vehicle manufacturer to publish the Environment Report in 1999, we will enhance our information disclosure internationally with the English version from 2000 about our "environmental conservation policy and efforts".

In 1999, 4,500 copies of Japanese version were distributed.
In 2000, 6,300 copies of Japanese version and 750 copies of English version were distributed.
For event participants, 8,000 copies of digest version were distributed.

Corporate Website on Environment

Isuzu corporate website has "Isuzu Environmental Report 1999/2000", "Environmental Date by Vehicle", "List of Vehicles Complying with the Green Purchasing Law" and "Diesel Seminar".

http://www.isuzu.co.jp/world/

Educational Booklet

We published a revised issue of "Diesel Seminar" for the better public understanding of diesel. In response to inquiries and requests for information and plant tours from elementary school children, "Environment and Vehicles" is available for them. These booklets have been well received as good educational tools for plant tours, the Eco-Products 2000 Fair and other events.

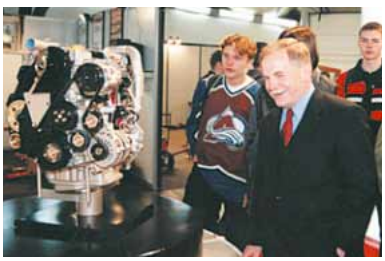
"Diesel Seminar" 1999 edition

2000 edition

Overseas Model Site


ISO 14001 Certificate


ISPOL


Engine Exhibition

Akinori Imamura

President, Isuzu Motors Polska Sp.z o. o.

Engaged primarily in manufacturing technologies and planning. Appointed as vice president of P.T. Pantja Motor, Indonesia/AICC in 1996. Appointed as president of ISPOL (Isuzu Motors Polska Sp.z o.o.) in June 2001.

Interview

Isuzu Motors Polska Sp.z o.o. (ISPOL) in Poland

ISPOL manufactures about 200,000 units of small diesel engines annually and supply them to Adam Opel AG and other customers.
Since its foundation in 1997, ISPOL has been conscious about environmentally friendly management under the green procurement program to purchase materials and parts from suppliers certified with ISO 14001. Last year, ISPOL obtained ISO 14001 certification. Specifically, our environmental conservation activities are "thermal and electrical energy saving program" and "soil and water resources conservation". We are also meeting the EU regulations on use of hexavalent chromium and lead. In addition, we have made environmental conservation efforts in cooperation with the local community, including support for the "World Cleaning Campaign", organized by the Tychy city office, and making green belts around the plant. Through these activities, we have been engaged in creating products considering the environmental impact throughout the business stages from production to disposal.
Recently, diesel engine manufactured by ISPOL drew much attention as an environmentally friendly product in the Environmental Tradeshow in Tychy. The excellent diesel technologies and environmentally conscious efforts of Isuzu have been highly appreciated in Europe, where diesels are recognized as environmentally friendly engines.
Also, in June 2001, ISPOL received the "President Business Award 2001" in the Excellent Foreign Company division from the president of Poland.

We have received suggestive messages from readers concerning Isuzu's environmental conservation efforts and this report. It is our corporate commitment to further conduct environmental conservation to respond to them.

Takehiko Murayama

Professor, Interdisciplinary Fields, School of Science and Engineering in Waseda University

I appreciate that environmental goals are specifically described with levels of their accomplishment for the fiscal year. I am also impressed by the specific descriptions of the complaints and accidents by plant. However, there are some points to be improved, including the presentation of actual achievements in energy saving and CO_2 emissions reduction efforts in relation to production scales, and specific descriptions of particular improvements in environmental conservation by your activities including ISO 14001 compliance. For example, it is necessary to describe more easily on how you have reduced and recycled waste. In addition, it appears that too much stress is placed on waste and CO_2 in plant management; PRTR must be emphasized more. You have made various good efforts in your activities, including LCA, green procurement and environmental accounting, and your "zero emissions" efforts deserve appreciation. I hope you will cope with harmful substances in exhaust emissions as the most important challenge in your environmental conservation activities, thus demonstrating Japan's high technical level in the relevant field.

Yoko Hagi

Principal Lecturer of an ISO Training Organization
Associate /principal consultant, L.M.J. Japan K.K.

This report describes the history of your positive activities from the early 1990s well, when environmental issues began to draw attention on a global scale. I'm much interested in the contributions you, as a manufacturer of products that have great environmental impact, have made to conserve the global environment to date, and in the contributions you will make in future. I hope that you will make long-term environmental conservation efforts. I also wish you to keep pursuing your unique activities, such as developing a new transportation system and integrating vehicle shipping and transport. It appears that almost all of your goals were accomplished in 2000, and I hope that you will set forth and accomplish higher goals.

Masakatsu Iwasa

Representative secretary, Tokyo Jyonan Environmental Counselors' Association
Kanagawa Prefecture Technical Advisor

Upon the promulgation of the "Establishing the Recycling-based-Society" in June 2000, manufacturers are now responsible of product recycling to be recovered as resources. Focusing on environmental consciousness and life cycle of products, the Isuzu Environmental Report represents a good example of information disclosure to fulfill your social responsibility.
I hope you will continue to resolve problems such as those concerning cost and driving performance by accomplishing the goals of ongoing environmental projects, including improving fuel efficiency and introducing clean energy sources. I hope Isuzu will be a world leading company in these categories.

Sachiko Ogata

Coordinator, Citizens' Alliance for Saving the Atmosphere and the Earth/CASA (designated NPO)

I have read through your Environmental Report and realized that you have made various efforts to be "green" in your business activities, including improving energy efficiency, clarifying exhaust emissions and parts recycling. I would also like you to extend product service life. The current situation is that buying a new car is more economical and more convenient than repairing and using an old car longer. A repair service should be easier and more reasonable in cost. I wish you to pay more attention to the vehicle maintenance business.

Akihiko Tsuyama

Free-lance environmental cartoonist
Creates environmental cartoons for children's learning magazines

First, I take off my hat to your environmentally conscious efforts. I'm most interested in your activity of creating an environmental booklet for elementary school children. I believe environmental education for children is a key to truly resolving environmental issues. Manufacturers unavoidably produce products that have a greater environmental impact in response to the demands of their customers if consumers choose such products. I sincerely hope you will be aggressively involved in educating consumers and producing excellent products.

Cover Message: The cover page illustrates a sustainable society in which all organisms and the earth are always happy.

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