



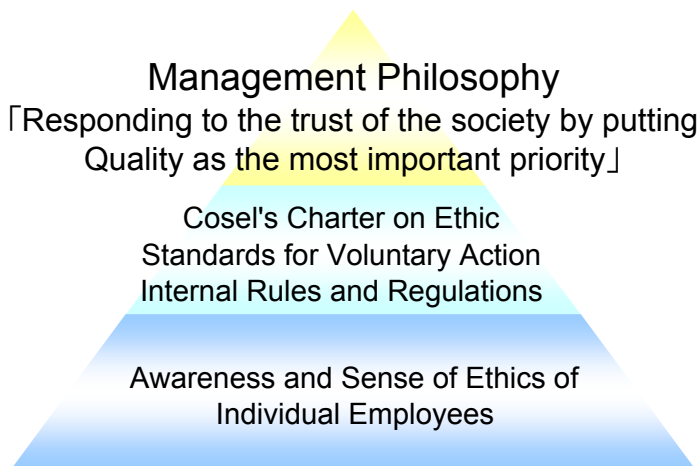
# Environmental Report2010

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Toward Environmentally Friendly Manufacturing

**Cosel, Co., Ltd.**

# Management Philosophy/Charter on Ethic

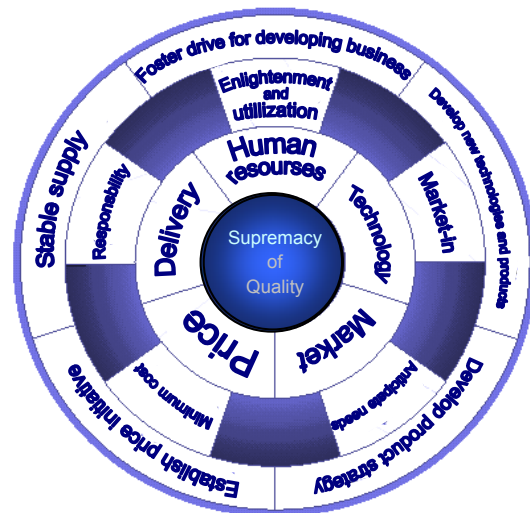


Positions of Cosel's Charter on Ethics and Standards for Voluntary Action

Cosel's Charter on Ethic and Standards for Voluntary Action are established so that all the management and employees of Cosel group become fully aware of their social responsibilities, completely comply with laws and regulations in settings of various business activities and act in a socially ethical manner in order to achieve our management philosophy of "responding to the trust of the society by putting Quality as the most important priority" (established in September, 2006).

We are trying to improve ourselves by using the idea and methodologies of Total Quality Management (TQM) based on our management philosophy of "meeting up with expectations from society by putting quality above anything else."

In order to achieve this, we are striving to secure our position in the increasingly competitive switch-mode power supply market by clearly presenting goals and measures and applying them on the company-wide basis to live up to expectations from society by providing attractive products.



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## From Our Editors

Every year at Cosel Co., Ltd., we are preparing and disclosing Environmental Report so that more people understand our environmental activities.

We are more than happy if this report helps you understand our environmental initiatives and activities.

In preparing this report, we have referred to "Kankyo Hokokusho Gaidorain 2007 (Guideline to Environmental Reports 2007)" issued by the Ministry of Environment.

◇Organizations Covered by this Report:

Cosel, Co., Ltd.  
 Head Office and Plant/Tateyama Plant

◇Period Covered by this Report:

May 21, 2009 to May 20, 2010  
 ("FY 2009" in this report refers to above period)

◇Issue Date of the Next Environmental Report:

July, 2011

◇ Last Issuance: July, 2009

◇ Number of Issues of the Last Issue: about 4,400 issues\* including downloads from our website

# Message from the President

Environmental issues are becoming increasingly serious and global warming in particular is a top priority issue for governments and business.

We need to change our current mass production and mass consumption pattern and create a new society with less environmental burden which generate less carbon and recycles more resources. Businesses play an important role here. Cosel as well is expected to make efforts to reduce environmental burden generated from our business activities and reduce burdens generated from the use of our products.

Against this background, we have developed our environmental policy and are using it as a guideline for our business activities. This includes, for example, reduction of CO<sub>2</sub> emitted in our production processes and introducing smaller products or products with higher energy conversion efficiency to the world through our new product development so that there is less CO<sub>2</sub> emission when our products are used.

We are determined to further environmental activities even more. Keeping the idea of protecting global environment and passing it on to the generations to come to our heart, we would like to steadily advance as a trusted company. Please feel free to contact us with your honest opinions and input for our further improvement.

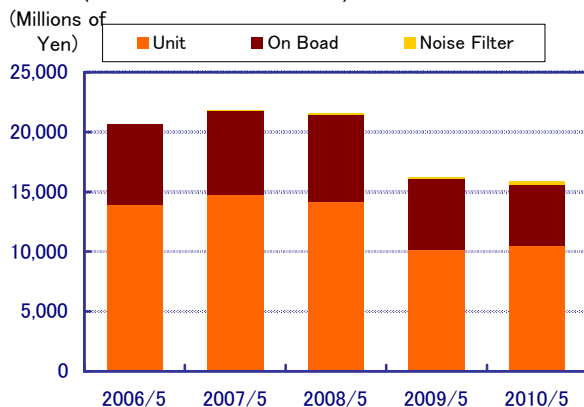


President and Representative Director  
**Machino Toshimichi**

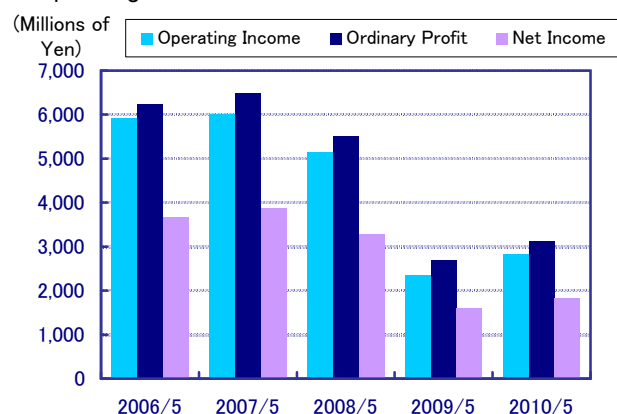
# Company Overview

- Trade Name: Cosel Co., Ltd.
- Headquarters: 1-6-43 Kamiakae-machi, Toyama City, Toyama Prefecture, 930 0816, Japan  
TEL : 076-432-8151  
FAX : 076-441-5324
- Business: Manufacturing and Sales of Electric Devices and Electrical Machine Equipment
- Main Products: Regulated Power Supplies (such as Switch Mode Power Supplies)
- Representative: Toshimichi Machino
- Date of Establishment: July 26, 1969
- Paid-in Capital: 2,055 Million Yen
- Annual Sales: 16,253 Million Yen (Non-consolidated basis for the period ended May 2009)
- Number of Employees: 417 (Non-consolidated basis as of May 20, 2009)
- Affiliates: TRANSERVE CO.,LTD. (Tateyama-machi, Nakaniikawa-gun, Toyama Prefecture)  
Taiyoudenshikougyou CO.,LTD. (Tsukioka-machi, Toyama City, Toyama Prefecture)  
COSEL U.S.A.INC. (San Jose, USA)  
COSEL EUROPE GmbH (Frankfurt, Germany)  
COSEL ASIA LTD. (Hong Kong, China)

### ◆ Sales (Non-consolidated Basis)



### ◆ Operating Profit/Current Profit/Net Profit for the Period



# Environmental Policies

## Environmental Principle

Harmonize production and product development with environment, endeavor to maintain and improve global environment and thereby contribute to the society

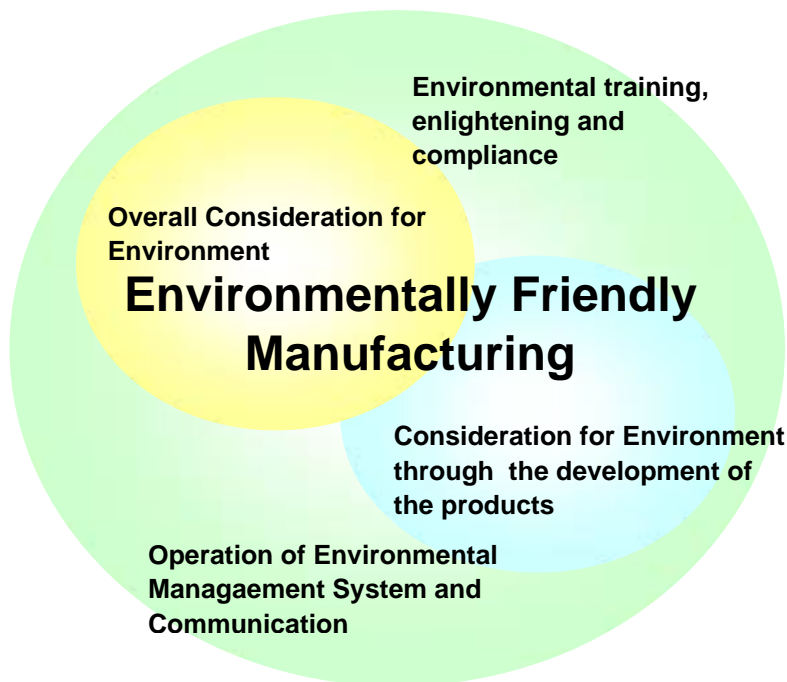
## Action Guidelines

Action guidelines are stipulated to put environmental principle into actions.

- (1) Offer environmentally friendly products.
- (2) Avoid unnecessary consumption of resources and promote reuse of wastes.
- (3) Reduce and eliminate the use of environmentally unfriendly chemicals and Endeavour to improve global environment.
- (4) Set and review goals and objectivities to control our activities, work for continuous improvement and prevent contamination.
- (5) Comply with national and local environmental regulations and respond to the needs of customers and local communities.
- (6) Provide all employees with environmental training and raise awareness.

This environmental policies are made public.

Set forth on May 21, 1999  
Revised on August 7, 2003  
Toshimichi Machino  
President and Representative Director  
Cosel, Co., Ltd.



# Our history about Environmental Activities

The following table shows our history since 1999 when we were approved on ISO14001.

(\*1) What is ISO14001?

It is an international standard for environmental management systems set by the International Standard Organization.

It is a management system to establish a mechanism within companies to continuously reduce and prevent environmental impact of their products and services.

category	'99 ~ '05	'06	'07	'08	'09
Management Systems and Disclosure	Head office and plant, Tateyama plant were approved on ISO14001, on Dec. 17, 1999 Issuance of Environmental Report. ('00 ~ ) Since FY2004, English version, too. Introduction of Environmental accounting ('01 ~ ) Campaign for Eco-conscious proposals ('04)	Updating to ISO14001, ver.2004 ('05)	Campaign for Eco-conscious proposals	Campaign for Eco-conscious proposals	Participation in Eco Test
Promotion of Society with recycling systems	<b>Promotion of 3R(Recycle, Reduction and Re-use)</b> Enlightening all employees about Environment ('99 ~ ) "Waste Segregation Patrol" by Environmental Committee Increase of recycling and re-use of metal parts, plastics, styrofoam, reel parts, stick parts ('02 ~ Tateyama plant, '03 ~ Head office and plant) Accumulation of plastic body wastes from subcontractors ('03) Issuance of "Waste Segregation Table" ('04) Recycling fluorescent lamps, waste fluid, white robes and conductive shoes at Head office and Tateyama Plant ('04) Recycling of tapes and paper tapes (Head office and plant) ('04) Treat stainless steels, iron and aluminum as valuable resources (Tateyama Plant) Recycling of tapes and paper tapes (Tateyama Plant) Treat stainless steels, iron and aluminum as valuable resources (Head office and plant) Improving environmental awareness through separation of plastic bottles (into caps, exterior films and PET) Banned creating garbage from things brought from home Eliminated unnecessary garbage bins on each floor				
Savings	<b>Reducing usage of papers</b> Computerization of the Standards ('02 ~ )				
Measurements against Global heating	<b>Reducing the quantity of electricity consumption</b> Enlightening all employees about Environment ('99 ~ ) 50kw Solar power generator set at Head office and plant ('01) 50kw Solar power generator set at Tateyama Plant ('04) switchboard unit electricity measuring machine device establishment at Head office ('04) Cool Biz Warm Biz Activities <b>Reducing Environmental burden by vehicles</b> Purchasing corporate existence cars with low emission ('03) Purchasing a Hybrid Car				
Green procurement of the products considering environments	<b>Saving energy through the products</b> Developing products with the higher efficiency and the power factor ('99 ~ ) <b>Abolishing the environmental chemical (substances except maintenance products)</b> <b>Total abolition of 6 substances in RoHS Directive</b> E Project starts ('03) Green Procurement Standards ('04) Data Base about Environmental Chemical substances ('03) Activities as investigation, evaluation and modification to abolish ('03 ~ ) Standardization and compliance to the procurement of the new components and materials ('03 ~ ) <b>Control Mecanism of Enviromental Chemicals Strengthened</b> Project Start Measurement methods of RoHS-restricted chemicals determined Registration of plating companies starts RoHS Project Start Establishment of many systems to control chemical materials Initiative to Eliminate PVC from Products starts Initiative to eliminate PFOS completely REACH regulation Elimination of HCFC-225 in our production processes <b>Lead-free</b> Lead-free Promoting Project ('01) Lead free in the solders used for plating metal plates, metal fittings; transformers, and solders in the assembly ('01 ~ )				
Contribution to the community	<b>Living together with the community</b> Tours around the plants by the inhabitants or schools near by ('03 ~ ) Sponcering Environment-related radio prog ('03 ~ ) Participation in Black Illumination hosted by the Ministry of Environment Collection of spoiled postcards Proceeds from the sales of our internal bazaar and donation from our employees are donated				



## FY2009 Achivement of Environmental Goals and Objectives

The following table shows our achivements of eEnvironmental goals and objects for FY2009. We will continue our activities for items with "x" in evaluation columns.

【Results: ○ : Goals Achieved ○:80% or more but less than 100%, x: less than 80%】

No.	Objectives	Goals	Results	Evaluation
1	Reduction of energy consumption	Electrical Power 4million kwh or less	4.14million kwh	x (*1)
2	Reduction of industrial wastes	Amount of Industrial wastes 17t or less	8.2 t	
		Recycling Rate 91% or more	95%	
3	Improve data on environmentally unfriendly chemicals for purchased components	AIS data(*2) fulfillment rate 85% or more	88%	

(\*1) Power consumption went up, reflecting increased orders and production from the second half of the fiscal year. In FY2010, we will change an index to basic unit and continue our initiatives.

(\*2) Data indicated on Article Information Sheet (AIS Ver3.0)  
(recommended by Joint Article Management Promotion Consortium)

## Environmental Goals and Objectives for FY2010

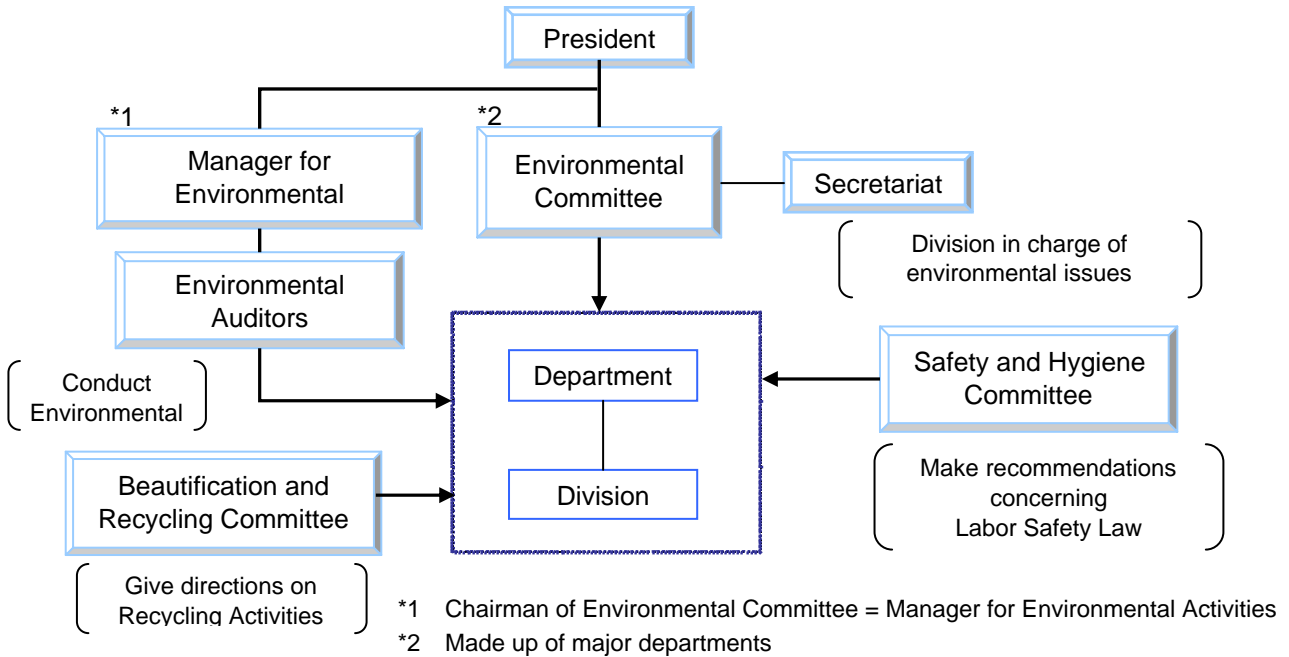
Progress in each area for FY2010 is confirmed at environmental committee, which is held every other month.

No.	Objectives	Control Item
1	Reduction of Power Consumption	Amount of CO <sub>2</sub> Emission from power consumption per 1 million yen of sales: 0.102t or less
2	Reduction of Industrial Wastes	Amount of Wastes per 1 million yen of sales: 0.46kg or less
		Recycle rate: 97% or more
3	Amount of CO <sub>2</sub> Emission in Solder Reflow of Aluminum Boards process	Amount of F emission per production unit: 50% or less of traditional production method
4	Efficiency Improvement of New Product A	10 points or more from previous product
5	Efficiency Improvement of New Product X	4 Points or more from previous product
6	Efficiency Improvement of New Product Y	10 Points or more from previous product
7	Efficiency Improvement of New Product Z	98% or more efficiency improvement under certain conditions
8	Reduce Power Consumption of Soldering Pots in Internal Production Lines	Reduction of power consumption of model soldering pot
		Implement measures to reduce power consumption
9	Promote Fitness Activities (Support Activities to Foster Forests in Toyama)	Participate in the events for "Foster Forests with Participation from Residents in Toyama Prefecture"
10	Introduction of Hybrid Cars	

# Management System

## Organizational Structure

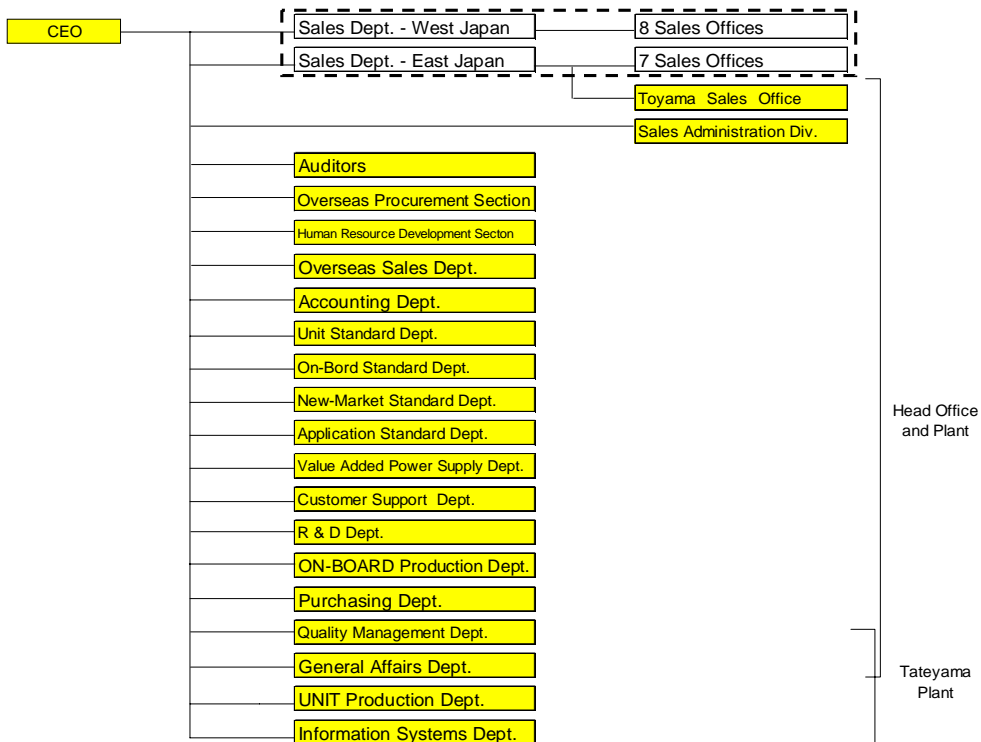
The following is our organizational structure to promote the activities to reduce Environmental burdens.



## ISO14001

We have complied with ISO14001 on Head office and Tateyama Plant, and are promoting continuous activities to improve ourselves.

Date of Acquisition: December 17, 1999  
 Area Covered: Head Office and Plant/Tateyama Plant  
 Registered by: Japan Quality Assurance Organization



# Management System

## Legal Compliance and Others

We are keeping abreast of changes and revisions of the environmental laws and regulations which we need to abide by in our environmental management activities monthly. If necessary to apply to us, we inform it to all employees through our internal Environmental Committee,

Regarding other requests, we input them in our computer system so that all the employees and the relevant can refer to for their references every time in need.

We are reflecting all the laws, regulations, requirements and evaluation results in our internal rules, regulations and standards and evaluating our legal compliance every year to make sure we do not violate any laws, regulations or requirements.

## Environmental Audit

We are conducting an environmental audit every year to confirm our compliance with ISO14001, implementation and performance status.

Our internal auditors form a team comprising of those who have taken internal and external audit trainings and deemed qualified to audit each department.

Currently, there are 28 internal environmental auditors.

Each auditor reports audit results including areas of improvement to each department manager. Each department reviews their activities and engage in activities for continuous improvement.

In FY 2009, 11 non-compliance cases were observed. Corrective actions were completed for all 11 cases.

## Prevention of Accidents

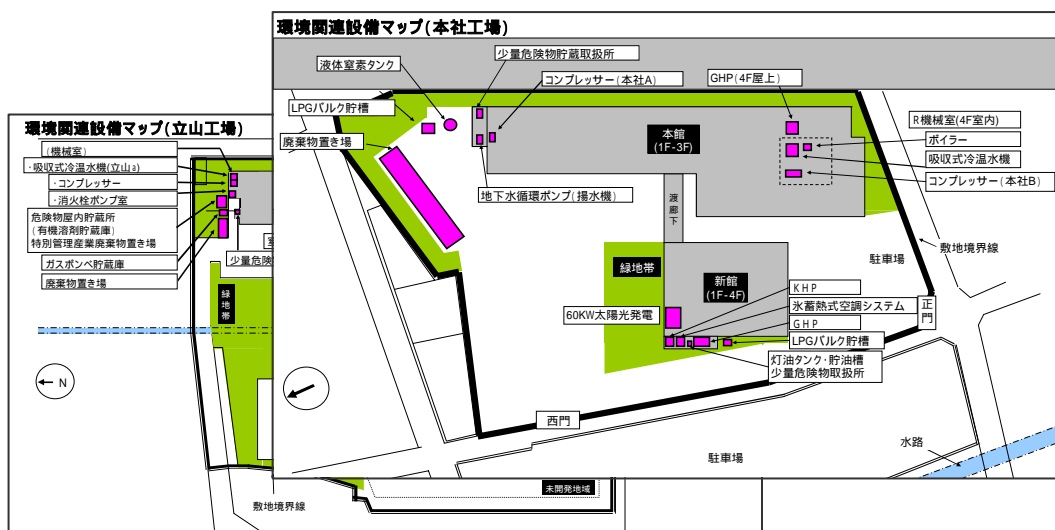
We have developed a "Environment-related Equipment Map" which shows where those environment-related equipments are in Head Office and Tateyama Plant to prevent and detect accidents caused by them abnormally.

If we determine that a certain equipment needs more control, we check if the procedure set forth in the case of emergency are put in place, and if the regular maintenance and measurement are conducted. In this manner, we are well-prepared to cope with an unexpected incident.

We have received no complaints from our stakeholders about the environment-related issues.

We have confirmed that all our measured environmental data, including vibration and noise level, do not exceed legal and regulatory maximum limits.

(Example) We are checking kerosene and oil tanks every month to see if there is any cracks or damages to prevent soil contamination.





# Highlights of Our Environmental Activities

## 1. Development of Smaller Highly Efficient Power Supplies

When we develop new products, we conduct their environment assessment from the standpoints of energy-saving, recyclability, use or non-use of toxic substances and environmental friendliness of packing materials to develop more environmentally friendly products.

All our new products are RoHS-compliant from their release date.

Our new products comply with RoHS directive at the time of their release. Our brochure cherries the following marks to draw attention.

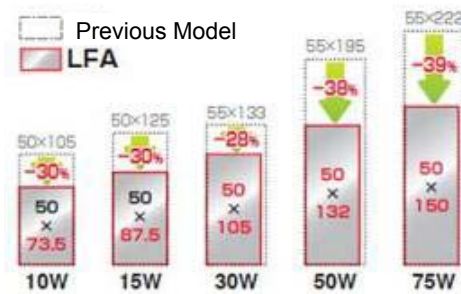


### Super Small/Light Weight LFA Series with Less Standby Power

Designed for Less Standby Power !  
Standby Power for 10/15W models is about

28 to 39% Smaller in Area than our Previous Models

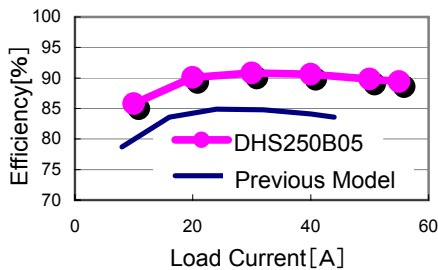
Environmentally Friendly  
60 to 75% Reduction  
in Standby Power  
(10/15/30W)  
Energy Saving



### Small and Highly Efficient DHS Series with Internal Micro computer

6% Efficiency Improvement from Previous Models !  
About 50% Reduction in Internal Loss !

50% Smaller in Volume than Previous Models



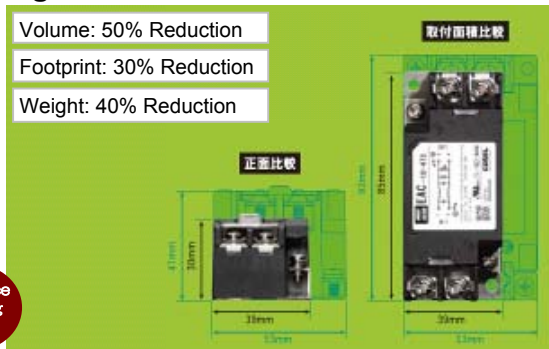
### Environmentally Friendly Small Single Phase Noise Filter EA Series

50% Smaller in Volume Than Previous Model !

30% Reduction in CO<sub>2</sub> Emission  
due to Resource Saving  
(About 7.2t-CO<sub>2</sub>/year)



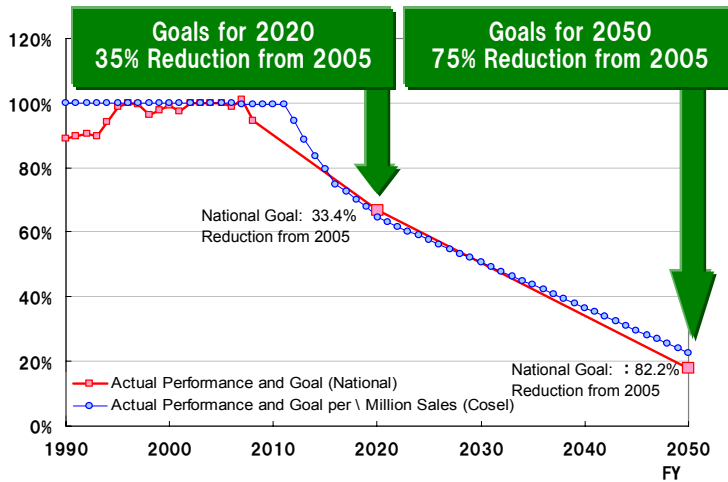
43% Reduction in CO<sub>2</sub> Emission  
during Transportation due to Weight Reduction  
(About 0.4t-CO<sub>2</sub>/year)



# Highlights of Our Environmental Activities

## 2. Setting Mid and Long-term Goals for CO<sub>2</sub> Reduction

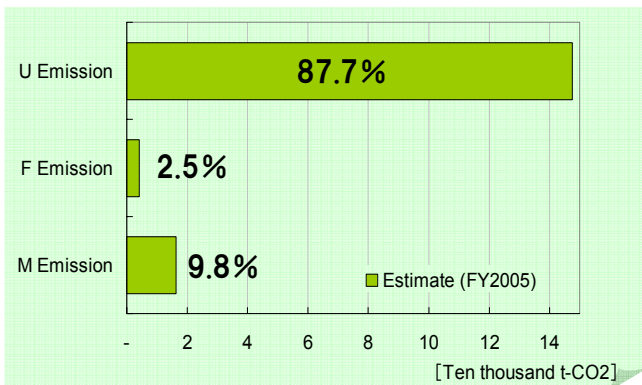
In FY2009, "CO<sub>2</sub> Reduction Project" led by a manager class person was launched and mid/long term reduction goals and action plans were established.



**Kazuyoshi Shimano**  
General Manager  
On-Board Standard  
Dept  
(CO<sub>2</sub> Reduction Project  
Leader)

Amount of CO<sub>2</sub> emission is a good indicator for us to use in our efforts to save energy and resources. These mid and long term goals are our first step for our long and steady activities. I am aware that these are very ambitious goals, but we need to achieve these goals at any cost.

### ● Action Plan for Reduction by 3 Categories



The amount of CO<sub>2</sub> emitted directly or indirectly from Cosel was divided into 3 categories.

- U Emission: Emission from Product **U**sing Process
- F Emission: Emission from **F**actory process
- M Emission: Emission from **M**aterials/Parts manufacturing process

The left graph shows the estimated CO<sub>2</sub> emission as of 2005.

	2010	2020	2030	2040	2050
U Emission	Development of ECO Model (50% Less CO <sub>2</sub> Emission from 2005 Model)	Development of ECO Model (75% Less CO <sub>2</sub> Emission from 2005)			
F Emission	Reduce CO <sub>2</sub> Emission from Soldering Machines in Half	Reduced CO <sub>2</sub> Emission from Production Equipment to One Forth			
	Reduce CO <sub>2</sub> Emission from Running New Equipment	Increase Investment in Environmentally Friendly Equipment			
M Emission	Make CO <sub>2</sub> emitted during manufacturing of components visible	Adopt Low CO <sub>2</sub> Emitting Components	Reduce CO <sub>2</sub> Emission from Manufacturing of Components		

# Highlights of Our Environmental Activities

## 3. Cool Biz Warm Biz Activities

87% of Cosel's CO<sub>2</sub> emission comes from electrical power consumption.

Company-wide effort is needed to reduce the electrical power consumption due to the use of air conditioning, which all employees are using on a daily basis.

At Cosel, we are refraining from excessive use of air conditioning by managing our thermostat setting and adjusting body temperatures by wearing appropriate clothes.

Thanks to the cooperation from employees, these efforts are taking roots. We would like to continue our efforts going forward.



The poster explaining about the cool biz to visitors.  
(Posted in the lobby area)



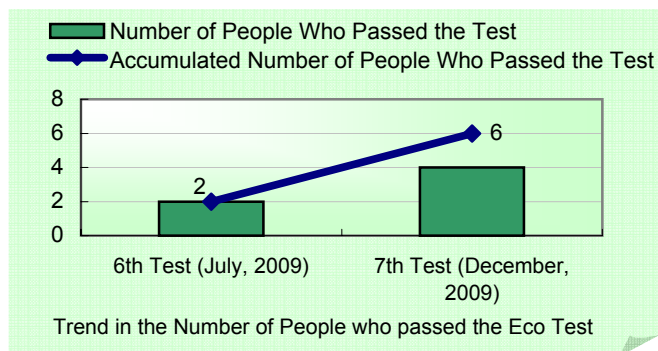
**Satoshi Kiyosawa**  
General Manager  
General Affairs Dept.

Cosel introduced the cool biz in FY2009 and started to take initiatives to reduce power consumption and maximum demand power during summer.

In particular, we have known from our experience that maximum demand power peaks in summer. Therefore, we became more sensitive to demand in using air conditioning. As a result, our maximum demand power this year was 98.7% of last year.

We will continue our company-wide efforts to reduce power consumption and maximum demand power in summer.

## 4. Participation in Eco Test



Trend in the Number of People who passed the Eco Test



**Hitomi Kusunoki**  
Quality Management  
Dept.  
(Passed the 7th Eco-  
Test)

Until I started to prepare for this test, I knew about environmental issues only vaguely. However, through reading a text book and trying to answer questions in previous tests, I was able to deepen my understanding.

I would like to start from what I can do today based on the knowledge I acquired through Eco Test.

Eco Test (officially known as Certification Test for Environmental Specialists) is a certification test run by the Tokyo Chamber of Commerce in order to develop people with a wide range of knowledge who can play a leading role in tackling environmental issues and facilitate the realization of a sustainable society where we can protect environment and achieve economic growth at the same time.

Quality Management Department which is responsible for environment-related activities played a central role in taking the test from the 6th test. 6 people took and passed the test until today.

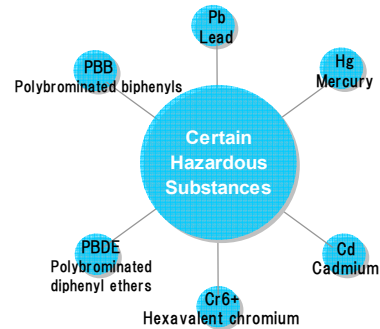
We will try to increase the number of test takers and certification holders of eco certification tests so that more employees have deeper understanding about environmental issues.

# Controlling Environmentally Unfriendly Chemicals

EU RoHS Directive (\*1) came into effect on July 1, 2006.

Cosel had achieved 100% compliance with RoHS Directive in February, 2006 (\*2).

REACH and PFOS came into effect in FY2007 and FY2008, respectively. Requirements to control environmentally unfriendly chemicals became even stricter. We have established the systems to control environmentally unfriendly chemicals and using these systems so that environmentally unfriendly chemicals are not used in our products.



## Green Procurement

At Cosel, we are facilitating "Green Procurement" in which we procure environmentally friendly components and materials in order to deliver environmentally friendly products to our customers.

We have defined "prohibited materials," "materials targeted for elimination" and "materials targeted for reduction" for components and materials which comprise our products. By doing this, we can prevent the entry of environmentally unfriendly chemicals into our products.

## Education on Environmentally Unfriendly Chemicals

In FY2006, we conducted an educational campaign on environmentally unfriendly chemicals.

Not only people working at our headquarters and Tateyama Plant, but also people who are involved with Cosel's products as our contractors and at transportation companies also participated in our test and training sessions.

Using a training material developed by our department which is responsible for environmental issues, training sessions were held by department and tests were given to participants to check their understanding about environmental issues. This enabled them to deepen their understanding of the objectives and the importance of managing environmentally unfriendly chemicals as well as activities taken by Cosel.

## Supplier Management

We are evaluating the risk of use of environmentally unfriendly chemicals by our suppliers and ranking them at 3 levels.

This ranking is used for the "Measurement of Environmentally Unfriendly Chemicals of Purchased Materials" and "Audit of Suppliers' Management of Environmentally Unfriendly Chemicals." This ranking is reviewed once every year.

Under this system, we audit and review how environmentally unfriendly chemicals are controlled by high risk suppliers and how high-risk components and materials are controlled by suppliers. We also facilitate registration of high-risk suppliers, materials and components.

(\*1)What is RoHS Directive?

RoHS Directive is an EU directive that will restrict the use of certain hazardous materials in electrical and electric equipment. The use of six substances, mercury (Hg), cadmium (Cd), lead (Pb), hexavalent chromium (Cr6+), polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE), will be prohibited from July, 2006.

(\*2) Excluding Maintenance Items

(\*2) What is REACH?

REACH is a regulation in which manufacturers or importers of chemical substances are obliged to register and evaluate chemical substances in manufacturing or importing them and, in the case of chemical substances of very high concern, an authorization from relevant authorities is required and high risk substances are subject to limitation including ban. REACH entered into force in June 2007.



# Controlling Environmentally Unfriendly Chemicals

## New Components, New Products and Mass Production Management

Since FY2006, we have been conducting fluorescence X-ray tests (\*3) by target measurement area to prevent the entry of environmentally unfriendly chemicals into our products. The fluorescence X-ray test allows us to confirm and verify whether or not a component is complying with our "Green Procurement Standards."

The evaluation is performed at the following 3 levels.

We have four X-ray fluorescence instruments in total, two units at our headquarter plant and another two at our Tateyama plant.

### New Product Launch

In the past when we adopted a new component, we conducted a "Quality Evaluation" to prevent the use of defective components. However, we decided to conduct fluorescence X-ray tests for mass production components to check the presence of environmentally unfriendly chemicals in newly adopted components. Test results are compared to the data about environmentally unfriendly chemicals which are submitted from suppliers before components are officially registered.

### Acceptance of Purchased Components

We also conduct fluorescence X-ray tests by target measurement area when we accept purchased components.

### After Shipping Mass Production Products

After we ship mass production products, we evaluate the presence of environmentally unfriendly chemicals to make sure that Green Procurement Standards are met on an ongoing basis, in addition to our longstanding electrical quality and mechanical quality evaluations.

(\*3)What is fluorescence X-ray test?

It is an analytical method in which information on the existence of an atom is acquired based on the wavelength of a specific X-ray and the intensity of the energy of the X-ray which is generated when X-ray is irradiated to an atom which comprise molecules.



Fluorescence X-ray Instrument

## Management of Production Lines

In order to prevent the entry of environmentally unfriendly chemicals into our products, RoHS-compliant products and non-RoHS-compliant products are manufactured in separate lines on our production floor by using separate equipment, jigs and tools.

Equipment, jigs and tools for soldering process are identified by signs and labels as shown in the following pictures.



Indication of Lead-free Solder



Indication of Eutectic Solder



Indication of Solder tank

# Environmental Conservation Activities

## 1. Energy Saving

87% of the energy Cosel consumes is electric power. Since the inception of the Company, all our fluorescent lamps at our shop floors and offices have had pull switches to reduce the amount of power consumed. We are making sure that lights are turned off during breaks and when not in use.

Furthermore, all the personal computers used at Cosel are set in the energy-saver mode and our monitors are automatically turned off when not in use. We are always taking small but important measures.

### ●Cutting Down Power Consumption of Computers

Entire company has adopted a power-saving configuration in which a monitor goes off and a computer goes to a stand-by mode when it is not in use for a certain period of time.

Power switches are provided for each computer or for each area so that when somebody goes home, he or she can turn off the power to reduce power consumption of computers not in use.



## 2. Use of Renewable Energies

FY2002 60kw solar power generator was installed at the rooftop of the new headquarters building

FY2004 50kw solar power generator was installed at the rooftop of the Tateyama Plant

FY2006 50kw solar power generator was added at the rooftop of the Tateyama Plant

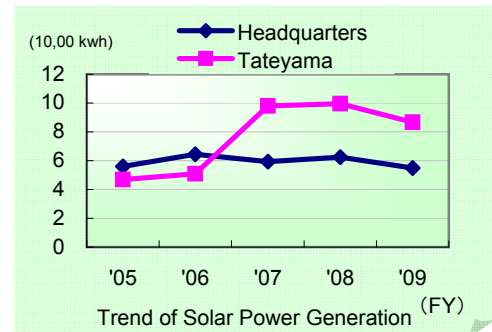
The impact of these generators is about 140,000kwh annually (CO<sub>2</sub> emission of about 59t-CO<sub>2</sub> reduction).



Solar Panels at New Headquarters



Solar Panels at Tateyama Plant



## 3. Reduce

### ●Intermittent Wave Soldering Pots



We used to move motors to keep molten solder flowing within soldering pots for soldering printed circuits. While flowing, solders were exposed to the air and were oxidized. Then, some solder dross were made and we have to consume more solder.

We have, however, upgraded our pots to have the intermittent jet method that let solder flow only when soldering is in progress. As a result, we have successfully reduced our solder consumption.



# Environmental Conservation Activities

## ●Elimination of Styrofoam

We had been using styrofoam as a buffer material for the shipment of our products because it was cheap and excellent to protect our products. After being used, it had been discarded as the industrial waste.

We have replaced plate-shaped styrofoam with cardboards and small styrofoam balls with biodegradable resin in order to reduce industrial wastes.

## 4. Reuse



### ●Reuse of Tape Reels and Semiconductor Sticks

We use chips to assemble power supplies. These chips are shipped from manufacturers reeled up onto plastic reels.

When chips are used up, the reels are left, which used to be discarded as industrial waste of stabilized type. Some semiconductors come in plastic sticks when shipped from manufacturers. These sticks had been discarded once semiconductors were used up just like the reels.

Because they do not get deformed or worn after use, we have changed our procedures to reuse them by having manufacturers collect them after use.



## 5. Recycle



### ●Paper Recycling

We are using both sides of copy paper sheets and, after both sides are used, segregating them together with confidential documents and magazines for collection and recycling by external organization.

Used paper collection boxes are placed at our workplace to promote paper recycling.



### ●Recycling of Waste Products and



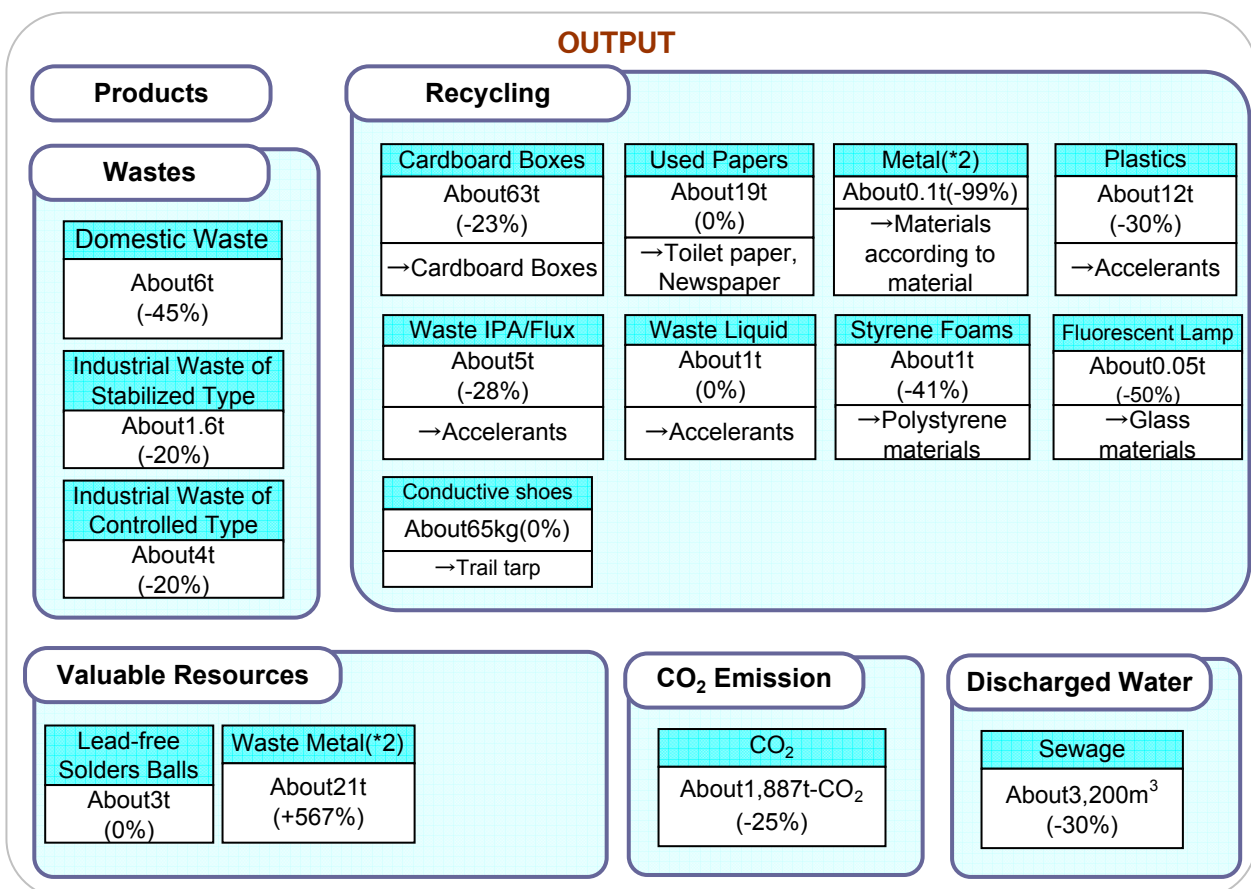
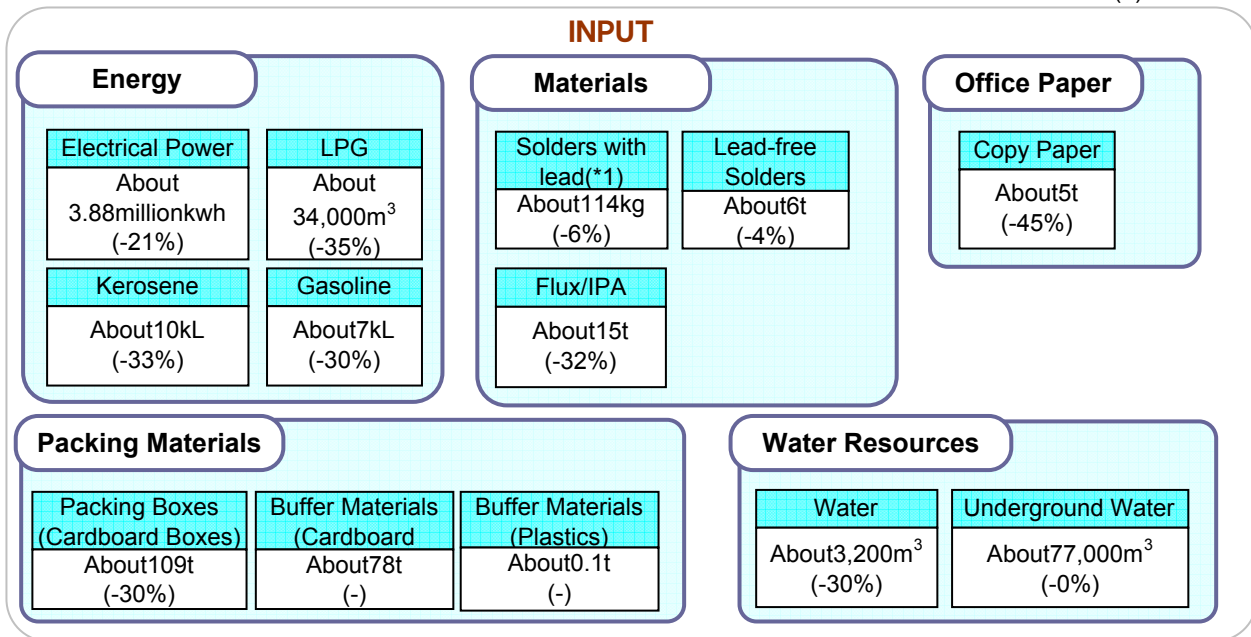
Defective products, unusable bottom plates and dummy circuit boards that were cut off in production processes had been discarded as industrial waste.

Now we are dividing these wastes into metals and plastics, etc. before disposing them so that they can be used as ingot and furnace combustion improver.

# Environmental Burden Data

Every year, we at Cosel are investigating environmental burden in our business activities for management purpose.

( ) YoY

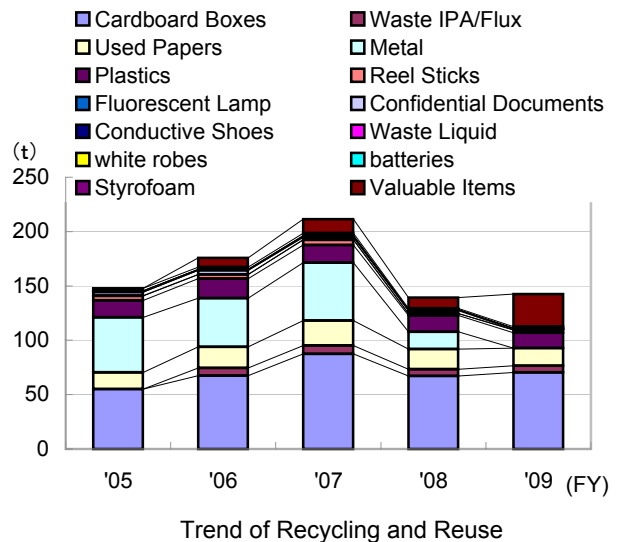
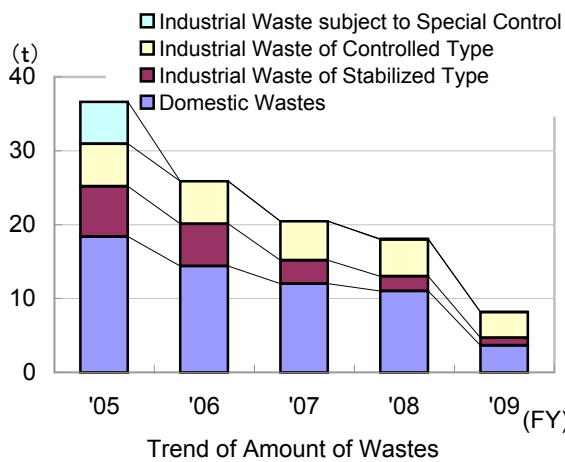
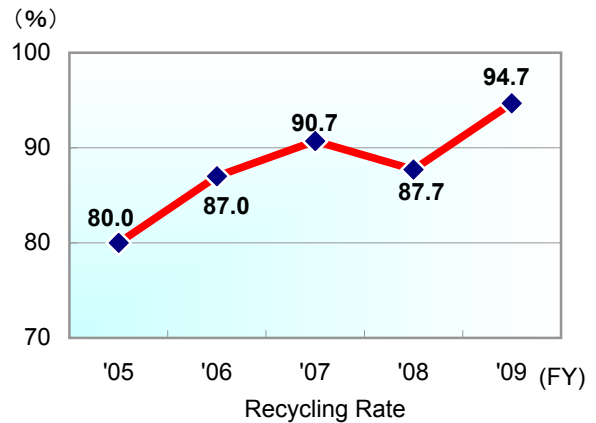
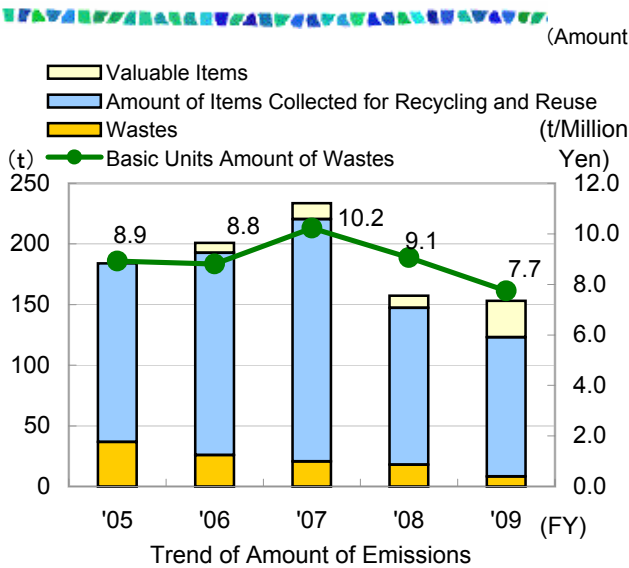


(\*1)Became completely lead-free

(\*2)It is changed from recycling to valuable resources

# Environmental Burden Data

## 1. Amount of Emissions



Many types of wastes are generated in our business activities. Many of them are recyclable if we segregate them properly.

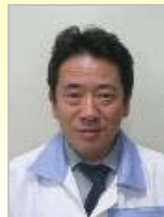
In FY2009, we took the following measures to reduce the amount of non-industrial wastes.

- Eliminated unnecessary garbage bins on each floor
- Made a compost from removed weeds in campus
- Banned creating garbage from things brought from home

These measures had a great impact. The amount of non-industrial wastes decreased 55% from the previous year thanks to the efforts of relevant people and increased awareness of employees.

Recycle ratio (\*1) hit a historic high of 94.7% due to the impact of reduced wastes.

\*Recycling Rate (%) = Total Amount of Wastes collected for Recycling and Reuse and Valuable Items for FY (kg)/Total Emission Amount for FY (kg) \*100



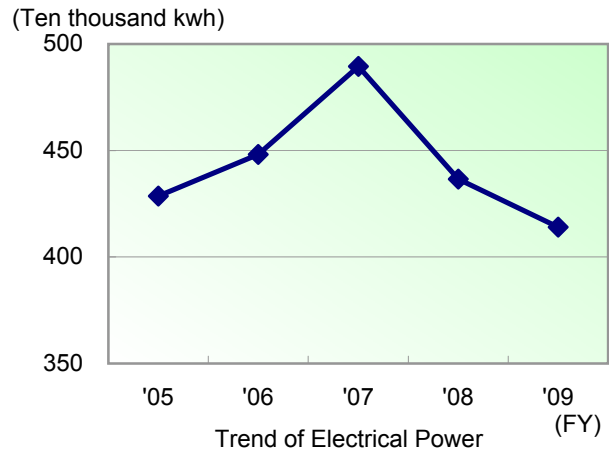
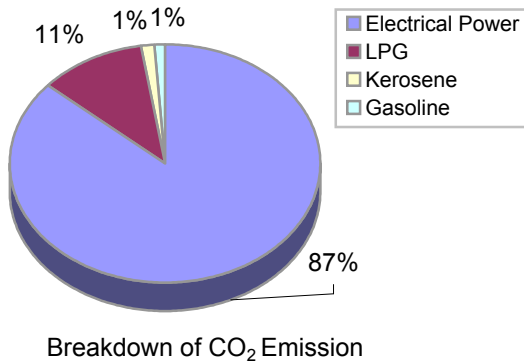
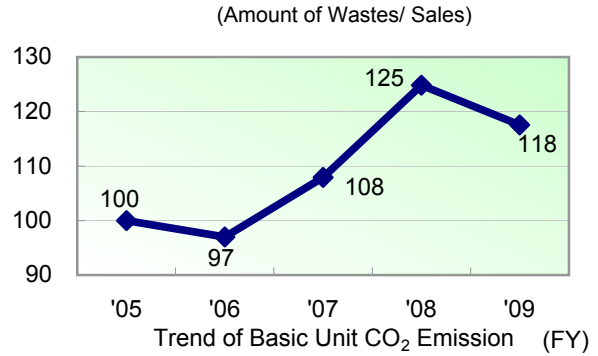
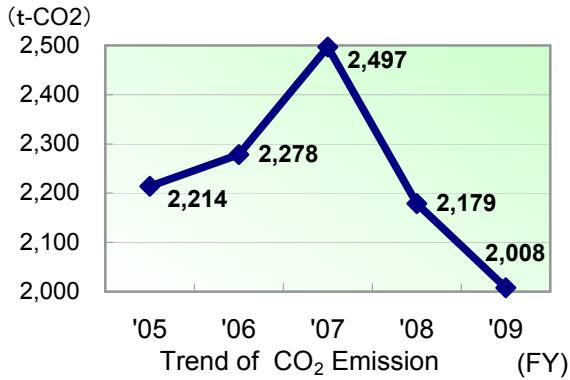
**Yutaka Tamou**  
 Director and General Manager  
 Quality Management Dept.  
 Chairman of Environment  
 Committee  
 Responsible for Environmental  
 Management

The reason why we were able to achieve a high recycle rate this year is that Cleanliness Recycling Committee and Environment Committee worked together in advancing their activities.

They removed excessive garbage bins and asked everyone to take non-production related garbage (such as containers for instant noodles) home. I am extremely grateful that, thanks to the cooperation from many employees, we are able to achieve a high recycle rate.

# Environmental Burden Data

## 2. Total Energy Amount



As we mentioned before, 82% of our CO<sub>2</sub> emission comes from electrical power consumption. In order to reduce this, our Environmental Committee is playing a central role in implementing many activities.

In FY2009, we are planning to launch a CO<sub>2</sub> reduction project and reduce CO<sub>2</sub> from such areas as our production processes.

We also introduced a hybrid cars to reduce environmental burden.



Hybrid car

## 3. Amount of Environmentally Unfriendly Chemicals

Our first notification to PRTR Initiative's Designated Chemical Substances was; "Dichloropentafluoropropane (HCFC-225).

We had been using dichloropentafluoropropane in production process for onboard products at our headquarters plant to clean and wash jigs. However, we stopped using it in FY2008.

HCFC stands for hydrochlorofluorocarbon, an ozone depleting substance, production and consumption of which will be phased out by 2020 by developed countries in accordance with the decision by the Montreal Protocol.

# Environmental Accounting

In FY2009, environmental preservation cost was about 52 million yen.

As for Environmental conservation effects, we have achieved an economic impact of 14 million yen.

(Covered Area: Head Office and Plant, Tateyama Plant  
Unit: Thousands of Yen)

## Environmental Conservation Cost

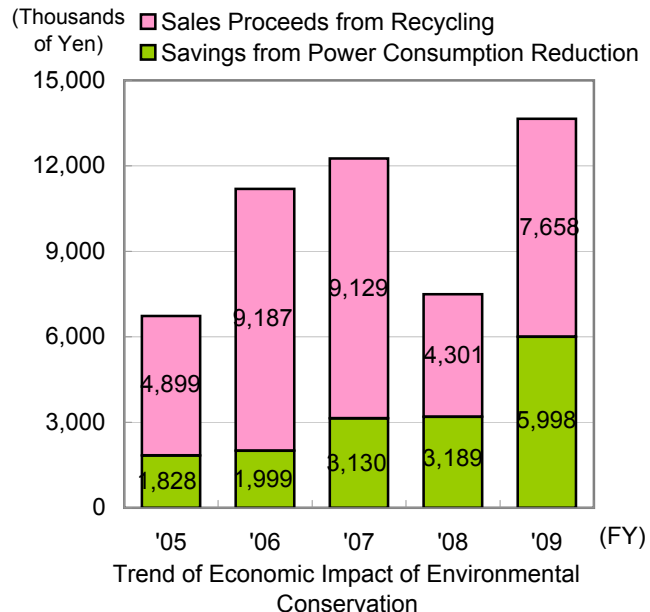
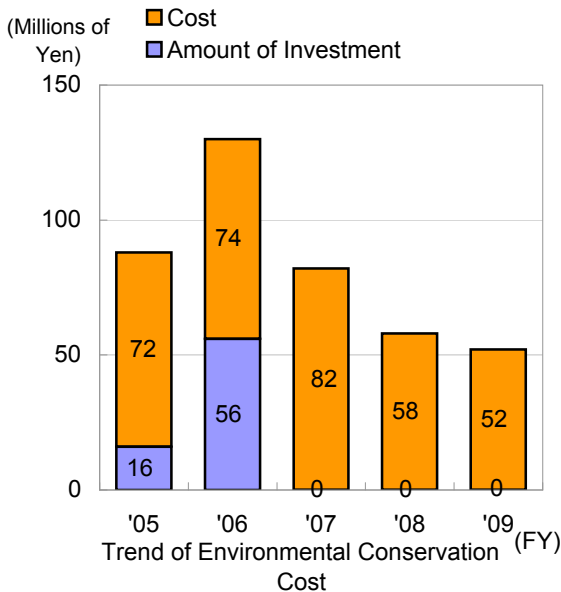
Category	Description	Investment	Cost
(1) <b>Cost within Business Area</b> Cost incurred to curb environmental burden through production and service activities implemented within business areas.			
① <b>Pollution Prevention Cost</b>		0	0
② <b>Global Environment Conservation Cost</b>		0	0
③ <b>Resource Circulation Cost</b>	(Cost) Waste Disposal and Collection of Recyclable Items	0	3,350
(2) <b>Cost at Upstream and Downstream</b> Cost incurred to curb environmental burden generated at upstream and downstream of production and service activities.	(Cost) Green procurement	0	35,762
(3) <b>Management Cost</b> Environmental Conservation Management Cost	(Cost) Management of Environmental activities. Monitoring and measuring data from facilities with Environmental burdens. Handling of Responses to Survey on Chemicals.	0	11,547
(4) <b>R&amp;D Cost</b> Environmental Conservation R&D Cost		0	0
(5) <b>Social Activities Cost</b> Environmental Conservation Cost for Social	(Cost) Sponsoring Environment-related radio program	0	1,200
(6) <b>Environmental Damage Control Cost</b> Cost to Control Environmental Damages		0	0
Total		0	51,859

## Environmental Conservation Effect (Substance Volume)

Item	Effect
CO <sub>2</sub> Reduction	183(t -CO <sub>2</sub> )
Effective Use of Wastes	145(t)

## Environmental Conservation Effect (Economic Impact) (thousands of yen)

Item	Amount
Savings from Power Usage Reduction	5,998
Proceeds of Sales of Recyclable Items (Valuable Items)	7,658
Total	13,656





# Environmental Education

## Environmental Education

For the purpose of Environmental Management, we have clearly identified types of the training in need. We are offering;

- (1) General trainings to raise awareness among employees about Environmental issues.
- (2) Professional trainings to improve technical skills in specialized areas as shown below.
- (3) Training on environmentally unfriendly chemicals (please see page 11)

(1)General trainings cover all the employees, including part-timers, temporary employees, if engaged for a certain period. As for the new employees, they are trained at first. If they do not understand enough, they will be trained till satisfaction.

No.	Operation	Description of Training	The concerned
1	Soldering	<ul style="list-style-type: none"> <li>• How to dispose of solder wastes</li> <li>• Check soldering machine</li> <li>• Emergency measures</li> </ul>	Persons who handle them
2	Treatment of Waste Organic Solvent	<ul style="list-style-type: none"> <li>• How to dispose fluid containing flux and/or IPA</li> <li>• Emergency measures</li> </ul>	People in charge of relevant tasks
3	Paper work concerning industrial waste	How to process industrial waste control slips (manifest)	
4	Confirmation of Revision of and Evaluation of Compliance with Environmental Laws and Regulations	How to confirm the revision of, and evaluate compliance with environmental laws and regulations	
5	Observe nitrogen gas filling	<ul style="list-style-type: none"> <li>• Check when observing liquid nitrogen filling</li> <li>• Daily check</li> </ul>	
6	Controlling chemicals and hazardous substance	Control methods based on internal regulations	
7	Confirmation of Kerosene Tank Check Results and Emergency Response	How to train, provide hands-on exercises and check understanding based on "Kerosene Tank Control Procedures (PEC018)."	

## Improve environmental awareness

### Community Trash Picking

On early rainy morning of July 27, 2009, management level employees of Tateyama Plant picked up trash in the area surrounding the plant. "I was surprised to see many cigarette butts" "I didn't find much plastic bottles and empty cans as I expected. Maybe our neighbors are picking them up." These are the comments from participants. This provided them a great opportunity to know about the conditions of their neighborhood which they hadn't noticed before.

We are planning to continue this activity.



Manager Picking Trash

### Segregate plastic bottles

Beverage vending machines are installed in our premises. Used plastic bottles are separated into exterior films, caps and bottles (main bodies) before being discarded.

We are trying to improve environmental awareness through an easy-to-do environmentally friendly activity.





## Social Contribution

### JEITA Toyama District Manufacturing Class



On May 8, 2010 (Saturday), "3rd JEITA Toyama District Manufacturing Class" was held at SMK Corporation. 34 male and female students in grades 5 and 6 from nearby 4 elementary schools participated in the class. Students worked on an electrical engineering project under the theme of "Let's Make a Light Blink using a Remote Control."

Cosel has been a part of this class since the 1st class. Our employees served as instructors and gave students a guidance.

Students seemed to have struggled in unfamiliar tasks such as assembling and soldering components. We received such comments as "I was amazed to see that components were melted and put together by soldering." "It was fun doing something that I cannot do at home," "It was a rewarding experience" from students.

※What is JEITA?

Japan Electronics and Information Technology Industries Association.

An organization composed of manufacturers and sellers of such products as electrical and electronic equipment, electronic devices, electronic components, electronic materials and software.

### Cosel Cup Challenge Super Kids

This is our 22th anniversary since we became a special sponsor for a sport event for boys and girls of grades 4 through 6 hosted by a local TV station.

About 357 children from 120 schools in Toyama prefecture participated in 5 events ranging from 100-meter sprints, ball throwing, broad jump, zigzag dribbling and swimming.

It became a sparkling day as children competed, family and friends cheered for them.



### Fund-raising Activities

Proceeds from the sales of our internal bazaar and donation from our employees are donated to Toyama Prefecture Cooperative Donation Society.

Donation amount is approximately 100,000 yen per year, which is enough to buy a wheelchair for the disabled or elderly.

The donation can be also applied to home-based service, volunteer training, accident prevention programs for children and fostering and nurturing of young people.



In FY2008, we sent about 100 spoiled postcards to National Federation of UNESCO Associations in Japan. The spoiled postcards are replaced with new stamps and then sold. The proceeds of the sales of these new stamps is donated.

The donation is used for the World Terakoya Movement, a program for people who had not been fortunate to have educational opportunities.



Cambodia



Nepal



Afghanistan

An article is equivalent in a sheet of spoiled postcard

# Benefits with Employees

## Activities for Labor Safety and Hygiene

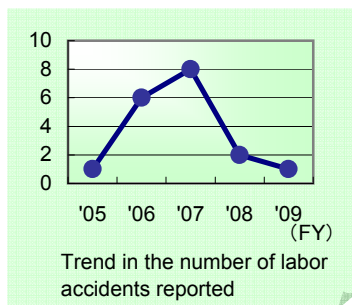
Safety and Hygiene Committees organized separately for the headquarters and Tateyama Plant are taking a lead and conducting a safety and hygiene patrolling for the purposes of maintaining and improving the safety of work environment (bimonthly).

When a problem is found as a result of the parole, a recommendation for improvement is issued, upon which a relevant department takes actions and reports back to the committee.

The number of labor accidents in the past 5 years is as follows.



Safety and Hygiene Committee members on patrol.



## Maintaining and Promoting Health

We are trying to maintain and improve mental and physical health of our employees through the following trainings.

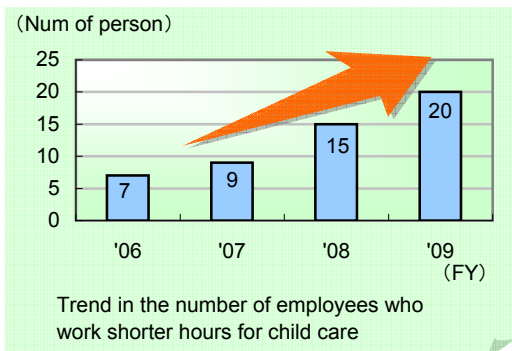
- Sexual harassment prevention
- Power harassment prevention
- Mental illness prevention
- Plan and prepare for pandemic flu



Class in Session

## Work and Life Balance

It is very challenging to raise children in single or dual-income families. This is one of the factors which invited declining birth rates and decreasing population of children. In this environment, one of the social responsibilities of businesses is to "support life and work balance" for their employees.

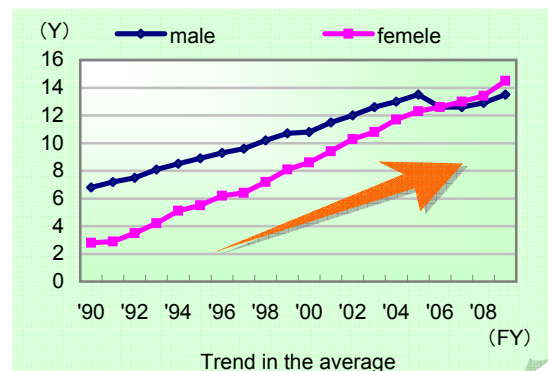


### ● Promoting the use of shorter work hours for child care system

Employees who are raising children in the 3rd grade or younger (as of the end of March of a fiscal year) can work shorter hours within the prescribed hours under our flexible work hour system.

The number of employees who use this system is showing an upward trend.

In response to the legislation of maternity leave and other leaves, we have introduced and implemented our internal programs since the 1990's. As a result, an average year of service of our female employees jumped 5 times in the past 20 years. It is now longer than that of male employees.



## Postface

Thank you very much for reading our "Environmental Report 2010."

Since we started to issue "Environmental Report" in 2000, we have expanded the coverage of our articles by adding articles about our social activities in addition to environmental activities in order to bring a better disclosure.

In this "Environmental Report 2010," Cosel's direction towards the realization of low-carbon society was shown with our mid and long-term targets for CO<sub>2</sub> emission reduction and action plans for reduction in 3 categories.

As a part of corporate social responsibilities, we will make efforts to disclose a lot of information about our activities which will take place to achieve these goals in the future.

July, 2010  
Cosel, Co., Ltd.  
Quality Management Dept.  
Quality Management Div. 1  
<http://www.cosel.co.jp/en/>