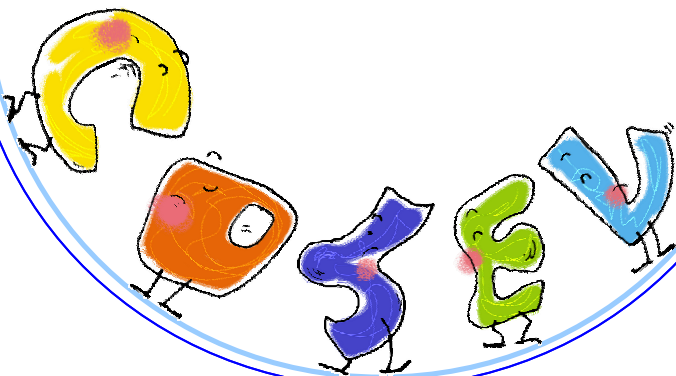


Environmental Report2012

Toward Environmentally Friendly Manufacturing



COSEL CO., LTD.

Table of Contents

From Our Editors	-----1
Message from the President	-----2
Company Overview	-----2
Outline of Our Business	-----3
Management Philosophy/Environmental Policies	-----4
Corporate Governance	-----5
Management System	-----6
FY2011 Achievement of Environmental Goals and Objectives	-----8
Environmental Goals and Objectives for FY2012	-----8
Setting Mid and Long-term Goals for CO2 Reduction	-----9
Highlights of Our Environmental Activities	-----10
Controlling Environmentally Unfriendly Chemicals	-----13
Environmental Conservation Activities	-----15
Environmental Burden Data	-----17
Environmental Accounting	-----20
Environmental Education	-----21
Numbers of Employees with Certification in the Environmental Field	-----21
Improve environmental awareness	-----22
Social Contribution	-----23
Benefits with Employees	-----24
Postface	-----26

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, 2011 to May 20, 2012

("FY 2011" in this report refers to above period)

Issue Date of the Next Environmental Report:

July, 2013

Last Issuance: July, 2011



Taken from our Digital Photo Club

Message from the President

Last year was a year when we were forced to realize the helplessness of mankind in front of great natural forces which caused such disasters as the Great East Japan Earthquake and flood in Thailand. We felt more than ever that what we needed was a social system which was resilient to natural disasters.

As a developer and manufacturer of equipment related to electricity, we believe that we can contribute to energy saving for the entire society through business activities by encouraging activities to reduce environmental burdens generated from our business activities as well as by developing and introducing highly energy efficient products with reduced electrical loss.

We also believe that it is our mission and responsibility to pass on this precious earth's environment in healthy conditions to our next generation.

We will promote activities to reduce environmental burdens further and aim to become a company on which our customers would say "we could like to use Cosel products" for both our quality and environment.

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.

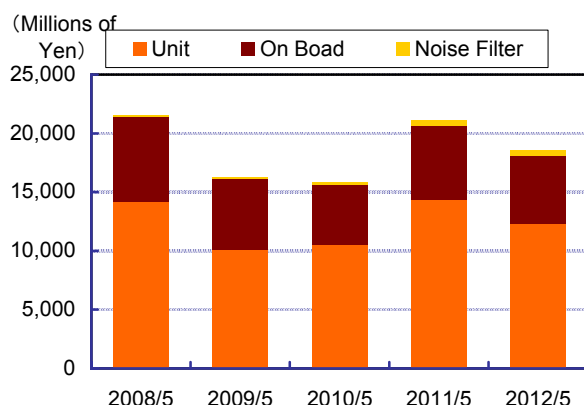


President and Representative Director
Keiichi Fukumura

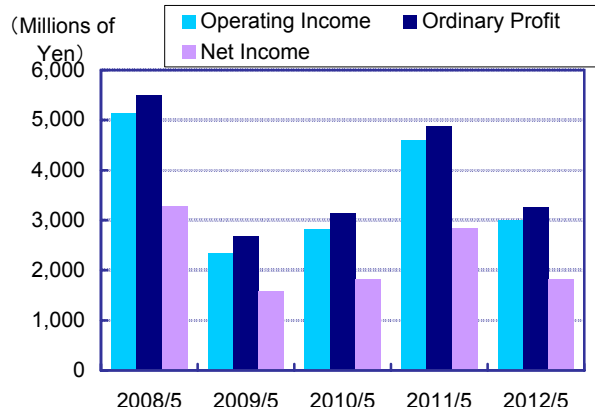
Company Overview

- **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:** Keiichi Fukumura
- **Date of Establishment:** July 26, 1969
- **Paid-in Capital:** 2,055 Million Yen
- **Annual Sales:** 18,586 Million Yen (Non-consolidated basis for the period ended May 2012)
- **Number of Employees:** 428 (Non-consolidated basis as of May 20, 2012)
- **Affiliates:** 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)
Cosel (Shanghai) Electronics Co., Ltd.
Shanghai Cosel International Trading Co., Ltd.
Wuxi Cosel Electronics Co., Ltd.

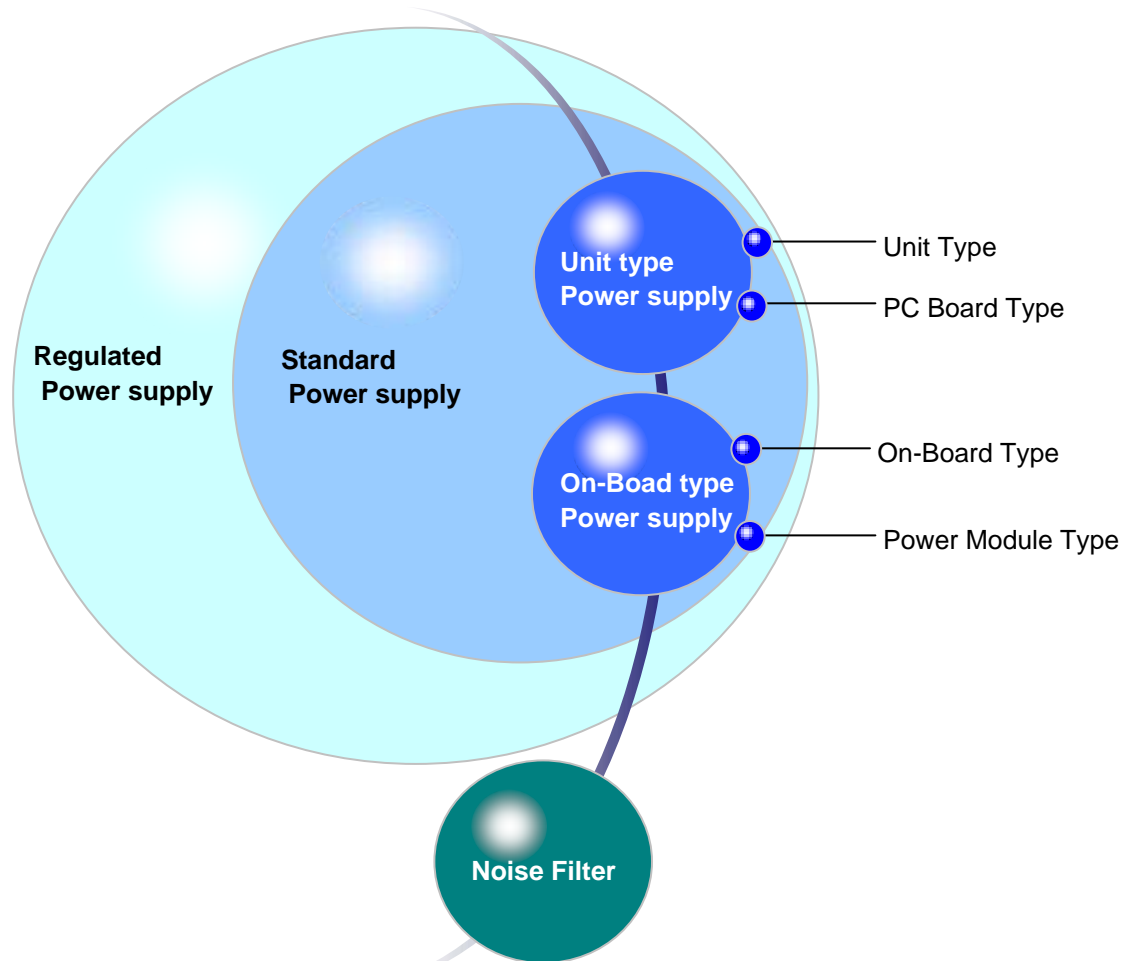
◆ Sales (Non-consolidated Basis)



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



Outline of Our Business

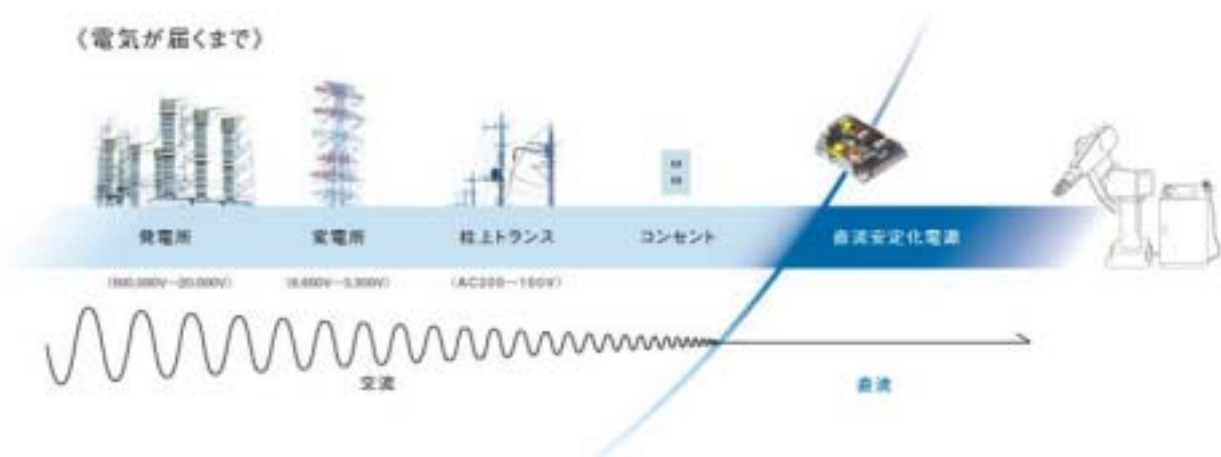


Many electric components including semiconductor devices are used in electronics products such as industrial and commercial equipment. For these equipment to operate, electrical power delivered to factories and households needs to be converted from alternating current (AC) to direct current (DC). Our regulated DC power supplies make this possible.

In particular, switch mode power supplies are our main products. They are used in many electric devices such as information and telecommunications, medical and FA equipment because they are compact, light weight and highly efficient.

We can say that switch mode power supplies are the hearts of these equipment and hold a key to the future of the electronics era.

We will continue our dialogue with new technologies and make highly reliable products which will help build the future of electronics.



Management Philosophy/Environmental Policies

Management Philosophy

"Responding to the trust of the society by putting Quality as the most important priority"

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.



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).

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

- (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) Enlighten employees about environmental preservation including biodiversity conservation through environmental trainings of all employees.

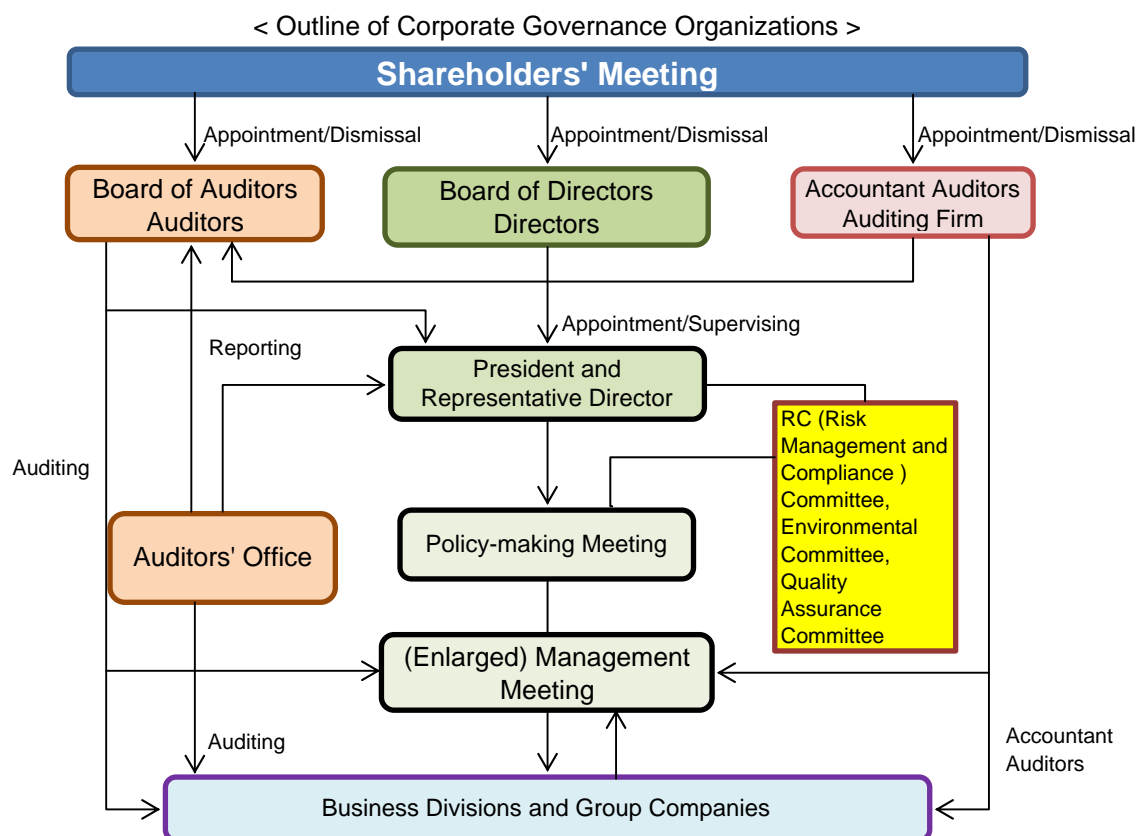
This environmental policies are made public.

Set forth on May 21, 1999
Revised on July 24, 2012
Keiichi Fukumura
President and Representative Director
Cosel, Co., Ltd.

Corporate Governance

【Basic Concept】

We take corporate governance as important business challenge. We are trying to improve our management efficiency to become a company which lives up to the trust and expectations of various stakeholders. We have adopted the Corporate Auditor System so that we have better management monitoring and compliance with laws and regulations.



Corporate Governance System

We are adopting the Corporate Auditor System. Two of our three auditors are external auditors as defined in paragraph 16, Article 2 of Companies Act. Currently, Cosel does not have any external director. There is no department that supports our external auditors.

However, information is communicated to our external auditors at our monthly board of auditors.

【Board of Directors】

The Board of Directors makes decisions on matters for which their decisions are required by laws, regulations and articles of incorporation. They also make decisions on management policies and business operations and supervise execution of duties by representative directors.

The Board of Directors comprises of seven directors. The meetings of the Board of Directors are usually held once a month. Directors execute businesses in the area of responsibility under direction of President based on the management policies decided on at meetings of Board of Directors.

【Board of Auditors】

The Board of Auditors comprises of three auditors; one standing auditor and two external auditors (out of which one is an attorney). They attend meetings of board of directors and other meetings and audit execution of duties by representative directors.

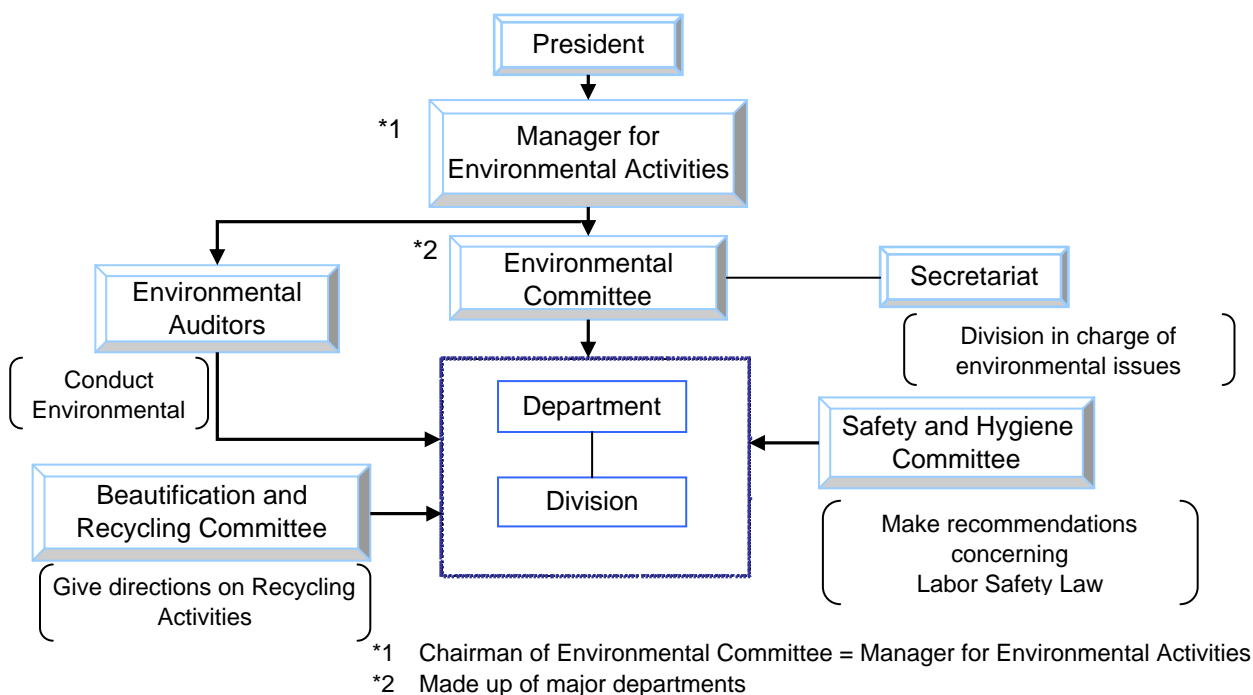
【Auditors Office】

Auditors' Office (comprising of two people) is established to enhance internal governance function in collaboration with auditors, the Board of Auditors and accounting auditors.

Management System

Organizational Structure

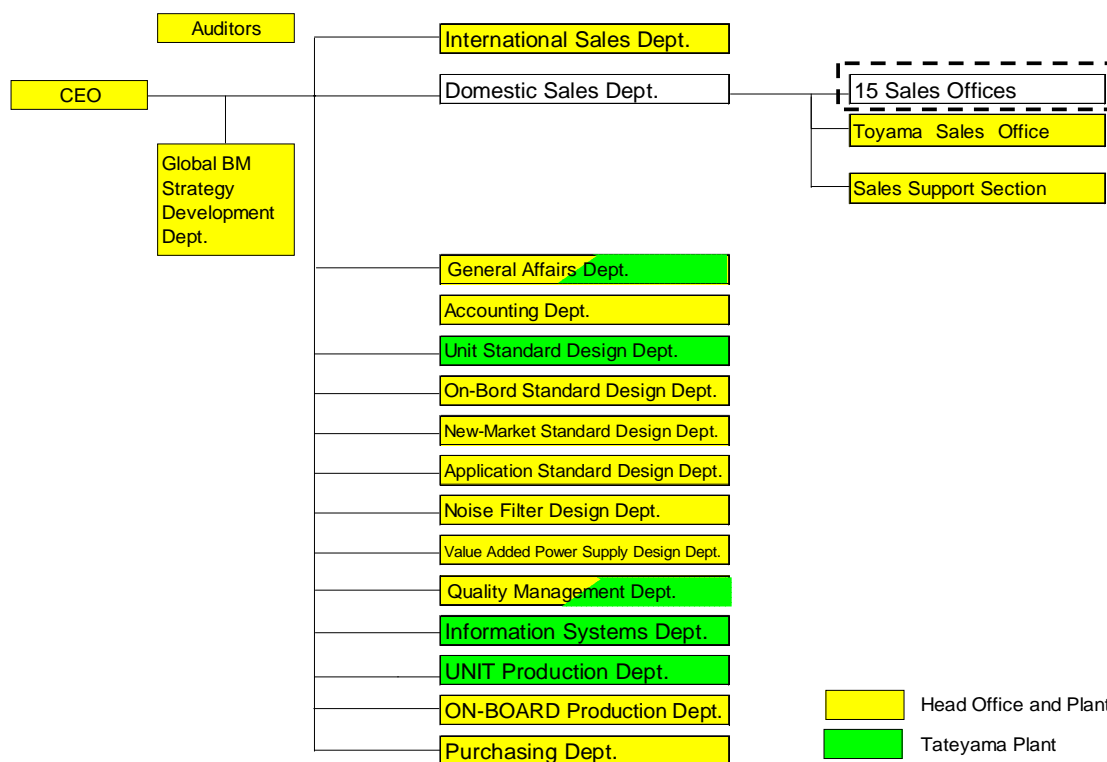
The following is our organizational structure to promote the activities to reduce Environmental burdens.



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 relevants 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 25 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 2011, 13 non-compliance cases were observed. Corrective actions were completed for all 7 cases.

Prevention of Accidents

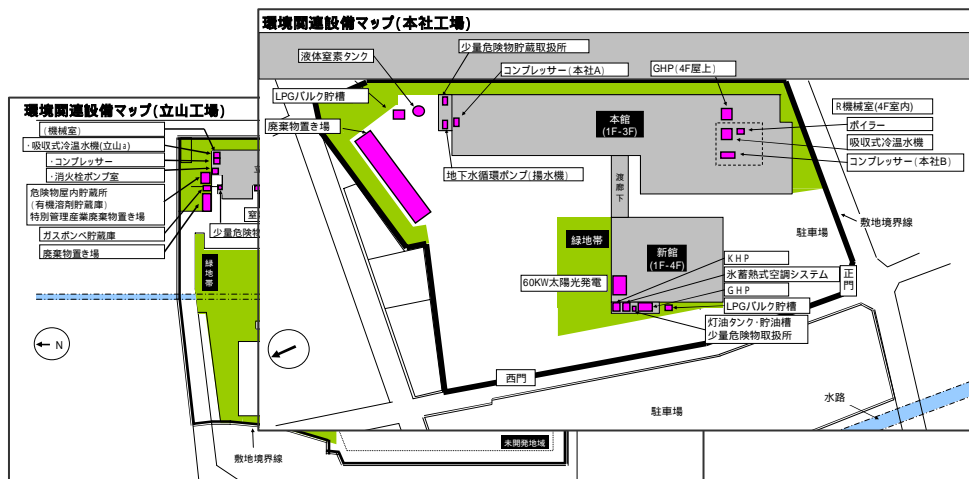
We have developed a "Environment-related Equipment Map" which shows where those environment-related equipments are in Head Office and Tateyama Plant to prevent and detect accidents caused by them abnormally.

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.



FY2011 Achivement of Environmental Goals and Objectives

The following table shows our achivements of Environmental goals and objects for FY2011.

We were able to meet the goals in the areas of reduction of CO₂ in production floors and improvement of recycling rates. However, we were not able to meet all of the goals for new product development because some of them were quite challenging.

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

No.	Objectives	Control Item	Results	Evaluation
1	Reduction of Power Consumption	Amount of CO ₂ Emission from power consumption per 1 million yen of sales: 0.08t or less	0.099t/million yen	x
2	Reduction of Industrial Wastes	Amount of Wastes per 1 million yen of sales: 0.46kg or less	0.42kg/million yen	
		Recycle rate: 95% or more	95.3%	
3	Reduction of CO ₂ from New Products	Efficiency Improvement of New Product A 90% or more	92.2%	
		Efficiency Improvement of New Product B 90% or more	87.2%	x
		Reduction of Stand-by Power of New Product C	Not achieved because of development delay	x
4	Size Reduction of Product D	2 or more reliability designs	Not achieved because of development delay	x
		Dynamic Load Response Less than that of Company M	Not achieved because of development delay	x
5	Increasing Power Density	Size Reduction of Transformers	Not achieved because focus was placed on making the entire products smaller	x
6	Reducing Power Consumption of Soldering Pots in Internal Production Lines	10% or more Reduction of Power Consumption of Model Soldering Pot	14.8%	
		Implement Measures to Reduce Power Consumption on at least 8 Pots	13	

Environmental Goals and Objectives for FY2012

Progress in each area for FY2012 is confirmed at environmental committee, which is held every other month.

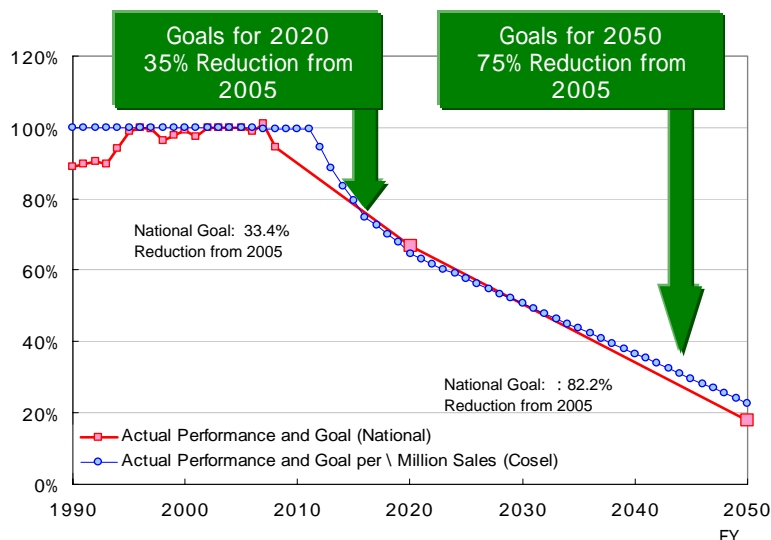
No.	Objectives	Control Item
1	Reduction of Power Consumption	Amount of CO ₂ Emission from power consumption per 1 million yen of sales: 0.111t or less
2	Reduction of Industrial Wastes	Amount of Wastes per 1 million yen of sales: 0.40kg or less
		Recycle rate: 95% or more
3	Establishment of technologies to make new product A meet ErP directive	Input Power with no load 0.4w or less
4	reduction of CO ₂ by new products	Efficiency improvement of new product B 90% or more
5	Establishment of new production methods for new product C	Process capability index of the transformer structure Cpk > 1.67
		Establishment of production conditions Creation of PC board design standards
		Design life 10 years or more
6	Establishment of design technology for small and reinforced insulation for transformer for new product C	Long-term pressure resistance design life 10 years or more
7	Reduction of power consumption in On-board Production Department	Reduction of Power Consumption in Base Unit 5% or more

Setting Mid and Long-term Goals for CO₂ Reduction

Setting Mid and Long-term Goals for CO₂ Reduction

In FY2009, "CO₂ Reduction Project" led by a manager class person was launched and mid/long term reduction goals and action plans were established.

In FY2011, we have established the Energy Saving Subcommittee and implemented some of the measures to reduce internal energy consumption. We will continue this effort in FY2012.

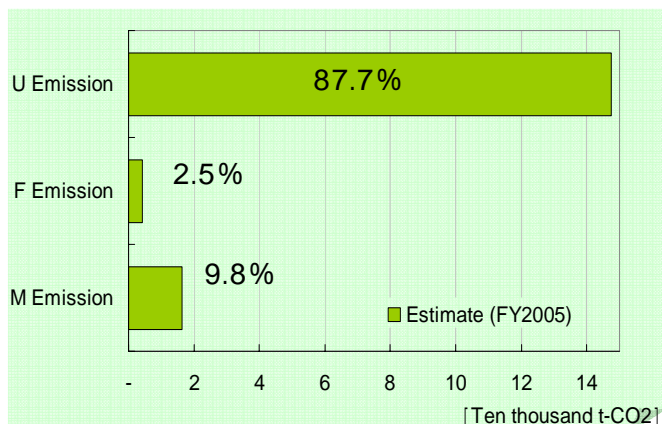


saving energy
subcommittee
Kazuyoshi Shimano

"We have started our long and persistent reduction activities to achieve these mid and long-term goals by dividing our efforts in 3 areas.

In FY2011, we focused on the energy saving activity aiming at reducing F exhaust from factories. Please read our report on that activity."

Action Plan for Reduction by 3 Categories



The amount of CO₂ emitted directly or indirectly from Cosel was divided into 3 categories.

U Emission: Emission from Product **U**sing Process

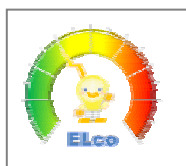
F Emission: Emission from **F**actory process

M Emission: Emission from **M**aterials/Parts manufacturing process

The left graph shows the estimated CO₂ emission as of 2005.

Introduction of Power Monitoring System

~ Making Power Consumption Visible ~



Power Monitoring System



To raise awareness toward energy saving, we have introduced a power usage monitoring system through which we can check power usage status on our intra-net.

With this system, we can check power usage status of a factory by area group and by equipment. We can also see our past power usage trend by year, month, day, time or in 30 minute increments. These information can be displayed in graphs which are automatically created.

This system enables us to understand our power usage status of our workplace and equipment. It is expected that this will raise awareness toward energy saving.

We will make use of this system and facilitate energy saving measures.

Highlights of Our Environmental Activities

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.

Furthermore, we have established our internal evaluation criteria based on which environmentally friendly products are recognized and registered as "eco model." We have created the following symbol for our eco models and promote these products to our customers (please see page 11).



Low Loss Low Cost Design with Simple Circuit Architecture PLA Series



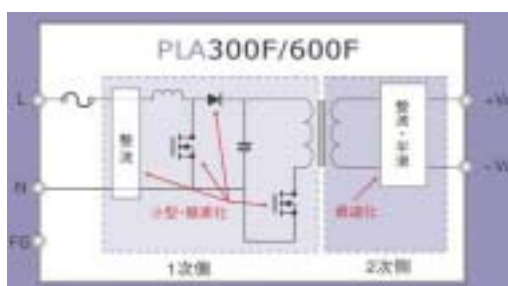
Dramatically Reduced Stand-by Loss with Fewer Fan Rotations at Light Load

Internal Standby Loss
 PBA600 (Previous Model) 2.6 W
 PLA600 9 W
 with option R 1.5 W
 94% Reduction from previous model

Energy Saving



30% Less Components with Simple Circuits!



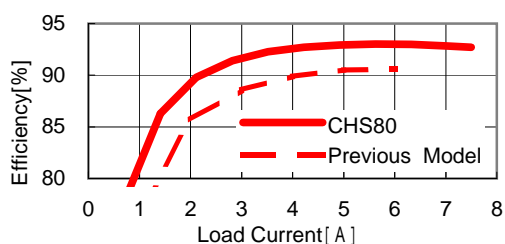
Resource Saving



CHS Series which Achieved World-class Compact Size and High Efficiency



3% Efficiency Improvement from Our Previous Model ! 30-40% Reduction of Internal Loss !



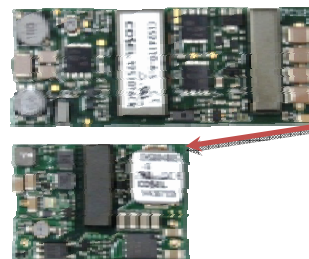
Energy Saving



23 - 30% Smaller than Our Previous Model !

Previous Model
 80W
 (CES)

CHS
 80W



Resource Saving

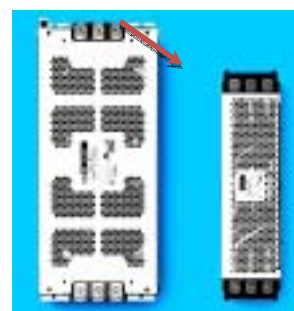
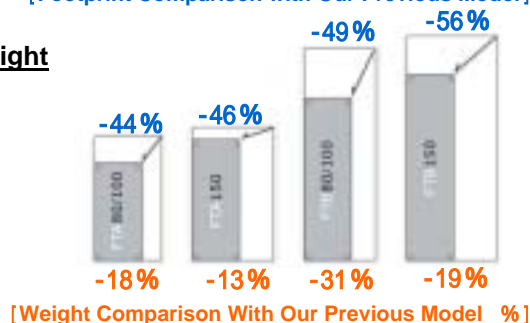


Noise Filter FT Series which Achieved Dramatic Space and Weight Reduction

[Footprint Comparison with Our Previous Model]



Space and Weight Reduction



Previous Model

FT

Resource Saving

Highlights of Our Environmental Activities

Establishing Eco Products: Environmentally Friendly Products and its Symbol

We have developed a new internal evaluation system on environmental burdens in order to provide our customers with information on our products and our efforts to promote the development of environmentally friendly products since 2010.

We are looking at the following 3 items in evaluating our products to reduce their environmental burdens.

- (1) Environmental burdens generated when our products are in operation at customers' site
- (2) Environmental burdens generated when our products are manufactured at our factories
- (3) Environmental burdens generated when materials and components we purchase are manufactured.

Based on the above 3 items, we set our own criteria to certify and register products which satisfy our criteria as "Eco Products." These Eco Products are highly efficient in reducing environmental burdens. To promote Eco Products, we developed the following symbol which represent Eco Products.



Cosel Co., Ltd. Eco Product Symbol

We will proactively expand our Eco Products to create an environmentally friendly low-carbon recycling-oriented society and to continue to grow with our customers.

This symbol mark is used in our product catalogue issued in FY2011 on pages covering Eco Products to provide information to our customers.



Example of a page in Our Catalog where this Symbol Mark is Used

Highlights of Our Environmental Activities

Reducing Environmental Burden in Production Floor:

~ Reducing Power Consumption of Soldering Pots ~

57% of power consumption by production equipment at our Tateyama Plant is accounted for by our use of soldering pots.

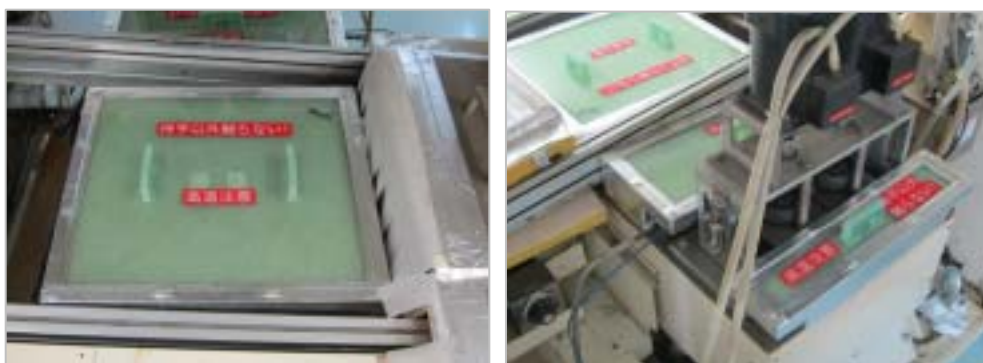
Therefore, in FY2010, we tried to reduce power consumption of soldering pots and achieved about 20% reduction by lowering power consumption in the pre-heater area.

In FY2011, we took the following three measures to reduce power consumption in the pot area.

- (1) Cover the top surface of the pots with insulating material during the night
- (2) Cover the top surface of the pots with insulating material during lunch break
- (3) Partially cover the pots with insulating material during production hours

With these measures, we were able to reduce power consumption by the soldering pots at Tateyama Plant about 15%.

In FY2011, we took these measures for our 11 internal soldering pots. In FY2012, we will expand these measures to soldering pots at our subcontractors.



Covers of Soldering Pots

Reducing Environmental Burden in Production Floor:

~ Culling of fluorescent light ~

We culled 23% of the fluorescent lights which were always on because we concluded that culling them would not cause any problem.



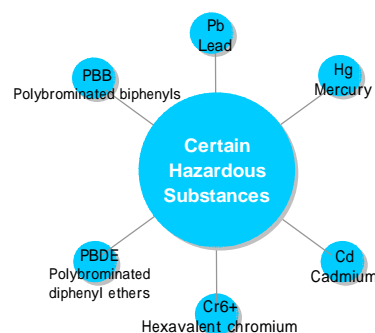
Production Floor After Culling Fluorescent Lights

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(*3) 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

(*3) What is REACH?

REACH is an 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 (*4) 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.

(*4)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

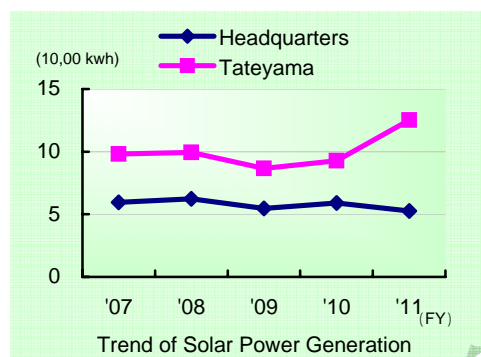
- FY2002 60kw solar power generator was installed at the rooftop of the new headquarters building
- In FY2004, 50kw solar power generator was installed at the rooftop of the Tateyama Plant
- In FY2006, 50kw solar power generator was added at the rooftop of the Tateyama Plant
- In FY2010, 50kw solar power generator was added at the rooftop of the Tateyama Plant

The impact of these generators is about 200,000kwh annually (CO₂ emission of about 84t-CO₂ reduction).



Solar Panels at New Headquarters

Solar Panels at Tateyama Plant



3 . Reduce

Reduction of Use of Air Cap Bags for Packing

Air cap bags were used when we shipped transformers and sheet metals, etc. to contract manufacturers. Once packages were opened at contract manufacturers' site, the air cap bags were disposed of as industrial waste.

We reduced the use of air cap bags by changing our packing methods using reusable Tupperware and containers.

Unpacking at contract manufacturers' site also became more efficient.

(This is one example of our QC circuit activities)



Air Cap Bags



Reusable Tupperware and Container

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.

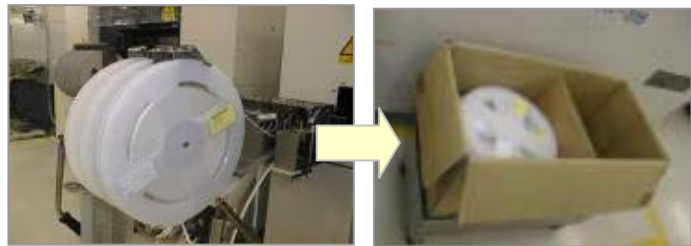
4. Reuse

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.



Reuse of Used IPA

We use isopropyl alcohol (IPA) as a diluent for fluxes which are used in soldering our products. We also use IPA for cleaning of jigs and tools.

In 2010, we introduced IPA recovery equipment to recover used IPA and reuse it. As a result, we were able to reduce the amount of chemical substances.



IPA Regenerator



Regenerated IPA

5. Recycle

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 Jan, 2011 to Dec, 2011

INPUT

Energy

Electrical Power	LPG
About 420millionkwh (92%)	About 44,000m ³ (88%)
Kerosene	Gasoline
About11kℓ (70%)	About8kℓ (84%)

Materials

Solders with lead(*1)	Lead-free Solders
About0.1 t (118%)	About8 t (68%)
Flux/IPA	
About25 t (89%)	

Office Paper

Copy Paper
About6 t (72%)

Packing Materials

Packing Boxes (Cardboard Boxes)	Buffer Materials (Cardboard Boxes,Plastics)
About202 t (110%)	About114 t (91%)

Water Resources

Water	Underground Water
About6,000m ³ (120%)	About84,000m ³ (98%)



OUTPUT

Products

Wastes

Domestic Waste	Industrial Waste of Stabilized
About3 t (91%)	About1.4 t (100%)
Industrial Waste of Controlled	Industrial Waste subject to Special Control
About3.6 t (75%)	About21kg (-)

Recycling

Cardboard Boxes	Used Papers	Plastics	Waste
About74 t (98%) →Cardboard Boxes	About24 t (106%) →Toilet paper, Newspaper	About17 t (92%) →Accelerants	About5.6 t (76%) →Accelerants
Waste Liquid	Styrene Foams	Fluorescent	Conductive
About0.7 t (84%) →Accelerants	About1.5 t (103%) →Polystyrene materials	About74kg (83%) →Glass materials	About116kg (173%) →Trail tarp

Valuable Resources

Lead-free Solders Balls	Waste Metal(*2)
About4.6t (64%)	About30 t (86%)

CO₂ Emission

CO ₂
About2,089 t -CO ₂ (91%)

Discharged Water

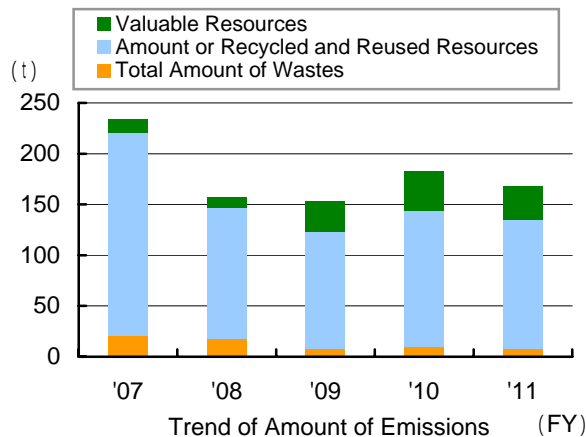
Sewage
About6,000m ³ (1120%)

(*1)Became completely lead-free

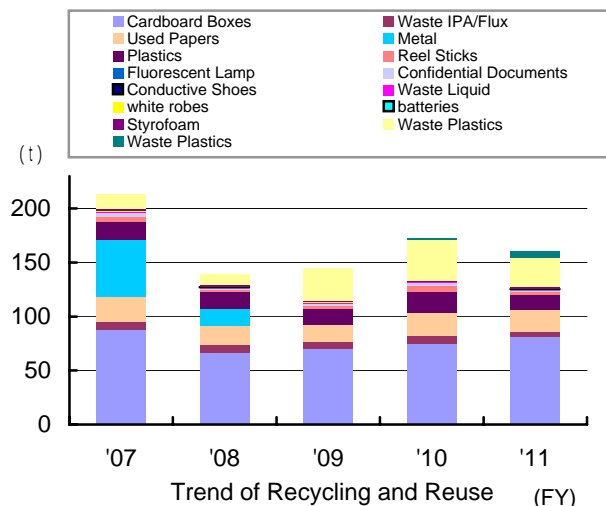
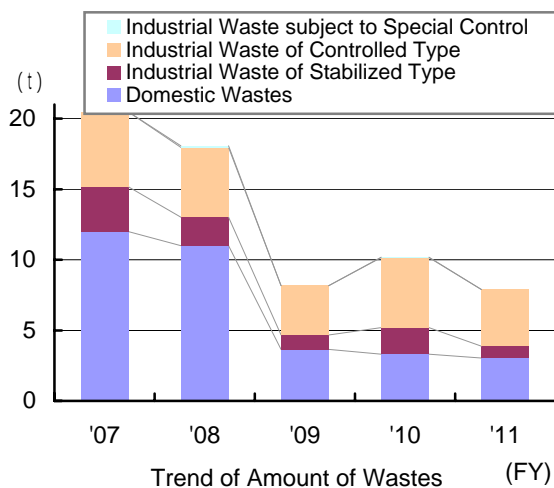
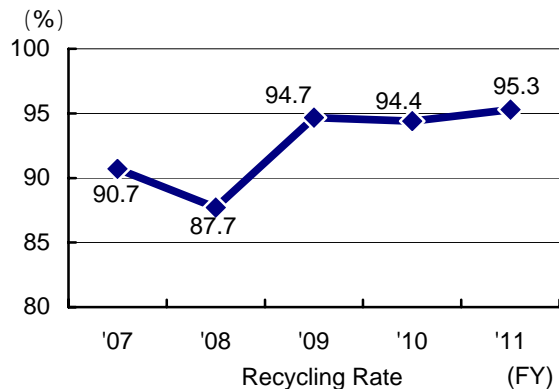
(*2)It is changed from recycling to valuable resources

Environmental Burden Data

1. Amount of Emissions



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



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

We at Cosel, Environmental Committee and Beautification and Recycling Committee are working together in such activities as making sure wastes are properly separated and emissions are reduced.

In FY2011, we called for to completely separate items brought by manufacturing and distribution subcontractors. As a result, we were able to reduce the amount of waste materials by about 20% from that of the previous year.

In FY2011, we have introduced an electrical manifest for some of the waste materials. We expect this will provide us with better compliance and administrative efficiency.



Chairman of
Environment Committee
Yutaka Tamou

"Environmental Committee is working on the following 3 major activities.

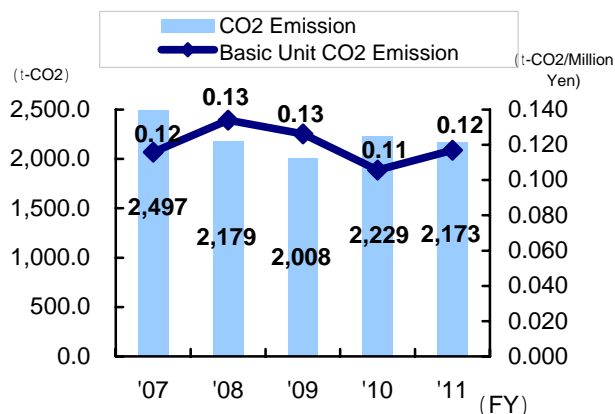
- (1) Reduction of CO₂
- (2) Improvement of Recycling Rates
- (3) Compliance with Laws and Regulations

In this fiscal year, we created our internal eco mark criteria for CO₂ reduction to improve conversion efficiency of our new products. Most of our products are power supplies and their conversion efficiency directly affects power consumption. Therefore, higher efficiency is always needed.

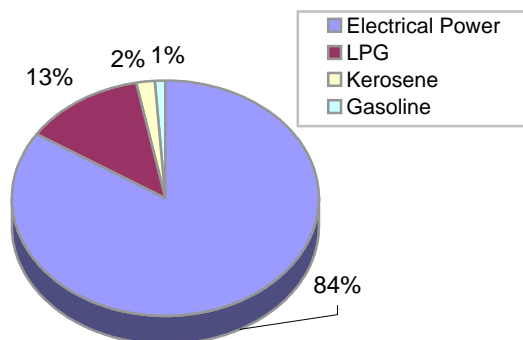
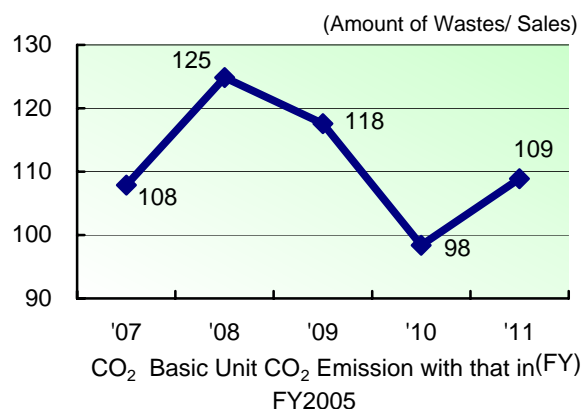
We will continue our efforts with a focus on making our products highly efficient."

Environmental Burden Data

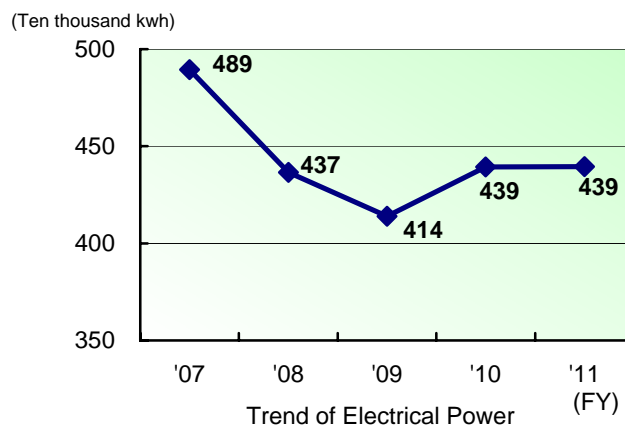
2. Total Energy Amount



Trend of CO₂ Emission and Basic Unit CO₂ Emission



Breakdown of CO₂ Emission



Trend of Electrical Power

As we mentioned before, 84% of our CO₂ emission comes from electrical power consumption. In order to reduce this, our Environmental Committee is playing a central role in implementing many activities.

As for our total energy use (crude oil equivalent) as a business operator under the Law Concerning the Rational Use of Energy was 1,268kl, which was not subject to notification requirement.

However, it is expected that our energy use will exceed the 1,500kl criteria within several years. Therefore 2 employees took the Energy Management Training in FY2010.

We have also confirmed that we are not specified consigner as defined by Law Concerning the Rational Use of Energy.

3. Amount of Environmentally Unfriendly Chemicals

Among chemical substances handled by Cosel, Class I Designated Chemical Substances whose handling amounts are subject to notification requirement with PRTR are "lead and its compounds." However, lead solder which falls under "lead and its compounds" is not subject to the notification requirement because we have already changed all of our solder to lead-free solder.

Environmental Accounting

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

Environmental Conservation Cost

Category	Description	Investment	Cost
(1) Cost within Business Area Cost incurred to curb environmental burden through production and service activities implemented within business areas.			
Pollution Prevention Cost	—	0	0
Global Environment Conservation Cost		0	5,794
Resource Circulation Cost	(Cost) Waste Disposal and Collection of Recyclable Items	0	1,981
(2) Cost at Upstream and Downstream Cost incurred to curb environmental burden generated at upstream and downstream of production and service activities.	(Cost) Green procurement	0	50,006
(3) Management Cost Environmental Conservation Management Cost	(Investment) Power Monitoring System (Cost) Management of Environmental activities. Monitoring and measuring data from facilities with Environmental burdens. Handling of Responses to Survey on Chemicals.	8,454	13,066
(4) R&D Cost Environmental Conservation R&D Cost	—	0	0
(5) Social Activities Cost Environmental Conservation Cost for Social Activities	(Cost) Sponsoring Environment-related radio program	0	1,200
(6) Environmental Damage Control Cost Cost to Control Environmental Damages	—	0	0
Total		8,454	72,047

Environment Conservation Cost includes depreciation of capital investment of the past year and labor cost.

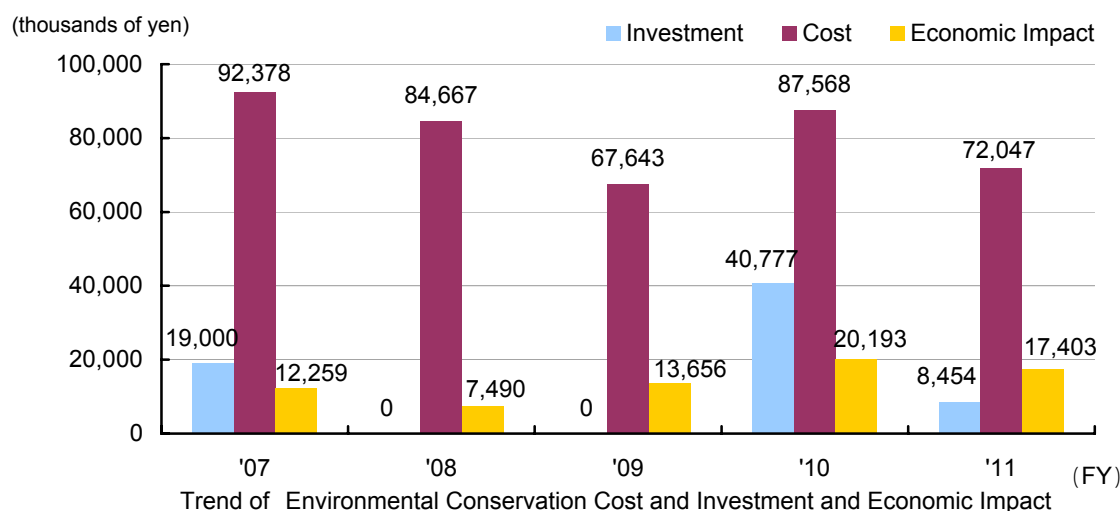
Environmental Conservation Effect (Substance Volume)

Item	Effect
CO ₂ Reduction	94(t -CO ₂)
Effective Use of Wastes	160(t)
Use reduction quantity of IPA	2(t)

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

Item	Amount
Savings from Power Useage Reduction	3,072
Reduction of Waste Disposal Cost thanks to the Recovery of Valuable Resources	853
Proceeds of Sales of Recyclable Items(Valuable Items)	13,478
Total	17,403

Economic effect based on assumption such as risk avoidance (expected effect) is not posted as effect.



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 13)

(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.













List of professional training

No.	Operation	Description of Training	The concerned
1	Soldering	<ul style="list-style-type: none"> • How to dispose of solder wastes • Check soldering machine • Emergency measures 	Persons who handle them
2	Treatment of Waste Organic Solvent	<ul style="list-style-type: none"> • How to dispose fluid containing flux and/or IPA • Emergency measures 	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"> • Check when observing liquid nitrogen filling • Daily check 	
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)."	

Numbers of Employees with Certification in the Environmental Field

We are encouraging employees to acquire certification in the environmental field and trying to increase the number of certified employees.

As of today, the following numbers of employees have certification in the environmental field.

No.	Name of Credentials	Number of Credential Holders
1	hazardous materials security superintendent	1 
2	Class B hazardous materials engineer	19 
3	Class C hazardous materials engineer	10 
4	chief of lead	4 
5	chief of organic solvent	13 
6	special controlled industrial waste	5 
7	chief of specified chemical substances	10 
8	1 health officer	10 
9	Safety Officer	8 
10	fire prevention manager	6 
11	Eco test	41 
12	Internal Auditor of the Environment	25 

Improve environmental awareness

Visiting Recycling Company with Plant Tour

In November, ten members of the Beautification Recycling Committee from our headquarters plant and Tateyama plant visited a recycling company to which we subcontract plastic recycling.

Plant tour was given to deepen our understanding about waste separation and to confirm how plastics are recycled.



Application Standard Design Dept.
Takaki Ueda

"This was my first time visiting the recycling plant, which made me realize once again how important recycling is.

I have had a vague understanding about how to separate waste items, but I would like to completely understand it going forward and would like to be able to separate waste items correctly and encourage people around me to do the same."

Segregate plastic bottles

Beverage bending 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.



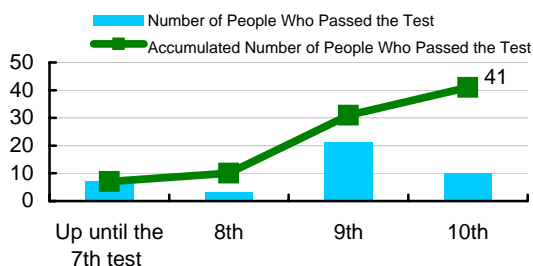
Encouraging taking Eco Test: Developing People who Work on Environmental Issues

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.

Cosel's employees started to take the test from the 6th test and 41 of them have passed the test so far.

We are encouraging our employees to take the test by subsidizing a test fee and making those who passed the test eligible for certification reward money.

We will continue this effort in FY2012.



On-Board Production Dept.
Yasuko Okamoto
(Past the 10th Test)

"It was hard to make time for study before taking the test, but it was fun learning about environmental issues broadly. I am glad that I passed the test."

Social Contribution

JEITA Toyama District Manufacturing Class



On June 2, 2012 (Saturday), "5th JEITA Toyama District Manufacturing Class" was held at Cosel. 25 male and female students in grades 5 and 6 from nearby 4 elementary schools participated in the class and engaged in an electrical engineering project under the theme of "Let's create Radios from Plastic Bottles."

Cosel has been a part of this class since the 1st class. In the 5th class too, our employees served as instructors and gave students guidance.

Children seemed to have struggled with unfamiliar tasks of assembling and soldering, but we received such feedbacks as "I was surprised that a radio could be made from simple things," "It was a learning opportunity and I got to experience something I couldn't get to experience at school," "I would like to participate again because it was such a rare experience."

What is JEITA?

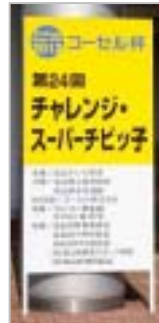
Japan Electronics and Information Technology Industries Association.
An organization composed of manufacturers and sellers of such products as electrical and electronic equipment, electronic devices, electronic components, electronic materials and software.

Cosel Cup Challenge Super Kids

This is our 24th 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 295 children 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

Human Development

【Our Philosophy on Training】

We believe that people are our most important assets and developing human assets is the driver for our growth.

【Basic Educational Policies】

Based on the above philosophy, the following basic educational policies are set forth.

1. Invigorate workplace
2. Improve leadership
3. Acquire necessary knowledge and techniques to become more capable
4. Develop skills for the operation and maintenance of an appropriate quality system
5. Be aware of the need of an environmental management system and develop skills for its operation and maintenance

【Educational Activities】

Educational Committee is playing a central role in planning and implementing various training and educational events in collaboration with other related departments.



DP (awareness raising) Training Offered to All Employees

Company Newsletters

【Purpose of Company Newsletters】

Newsletter Committee is playing a central role in issuing Company Newsletters twice a year, hoping that they will provide topics of conversation and serve as lubricant, making Cosel a company that everybody feel fortunate to be a part of.

【Topics Covered】

Our newsletters cover a wide range of topics including topics related to our workplaces, club activities and hobbies which employees are proud of.

Every issue of our newsletter provides enjoyable topics, sometimes revealing our 'colleague' hidden talents and sometimes showing us hidden less pretentious side of our usually naggish bosses.



Cover of Company Newsletter issued in FY2011

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

Club Activities

There are 11 active clubs within Cosel (a club can be formed with a minimum of 5 members and subsidized by the company).

There are culture-related clubs and sport-related clubs. They aim at maintaining and promoting health and developing friendship among members.

In FY2011, a defunct tennis club made a comeback and in FY2012, a running club was newly formed.



Running club Member sin Training

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.

【Encouraging Employees to Use Planned Paid Days Off】

Our internal rule stipulates that we have to use at least of 2 days of paid day off every half-year term.

By working efficiently, having good communication with our bosses and colleagues and using paid days off in a planned manner, we would like to achieve a good life-work balance and personal development and freshen up ourselves.



General Affairs Dept.
Yuka Nakamura

" I have shorter work hours. I come in 30 minutes later and leave office 30 minute earlier. I am so grateful that I am having shorter hours because this gives me more time to spend with my children.

I am trying to pay more attention to task prioritization than before and get things done on time within a limiting work hours.

I really appreciate people in my workplace for making this work for me."

Postface

Thank you very much for reading our "Environmental Report 2012."

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 2012," we highlighted on our departmental activities in order to achieve our mid and long-term goals of CO₂ emission reduction.

As a part of corporate social responsibilities, we will make our company-wide efforts to achieve our goals and disclose our activities.

July, 2012
Cosel, Co., Ltd.
Quality Management Dept.
Quality Management Div.1
<http://www.cosel.co.jp/en/>

