

Environmental Policy, Environmental Action Plan

Basic Philosophy

Environmental issues are a common challenge for all mankind. Every member of the NGK Spark Plug Group will work towards reducing environmental burdens from our business activities as much as possible and developing and providing products and technologies that contribute to improving the environment. We will also endeavor to communicate in greater depth with our stakeholders including our local communities so that we may all work together to contribute to creating a sustainable society.

Voice

Fiscal 2010 marked the end of the Eco Vision 2010 target period. We have taken the results of the seven-year effort seriously, and confirmed why some targets were achieved and why some were not. Based on this, we formulated Eco Vision 2015, comprising an Environmental Policy and an Environmental Action Plan, to indicate the direction of our environmental efforts from fiscal 2011 and on.

Fiscal 2015 targets are established under 16 items in the Environmental Action plan, and of these, my emphasis is on promoting our activities globally.

Each of our overseas corporations already conduct their own environmental activities, but in order to become a truly global company in all aspects including the environment, we must make efforts based on the same principle. To this end, the Group must first share a uniform environmental policy.



Takao Hamada, Director

Eco Vision 2015 (Formulated in April 2011)

Environmental Policy

Environmental Action Plan

Environmental Policy

We positively promote actions for environmental conservation through all business activities to contribute to construction of a sustainable society with the participation of everyone concerned.

[Action Guidelines]

- **Environmental management :**
We will abide by all laws, regulations, protocols, and voluntary standards relating to environmental conservation to prevent environmental pollution. We also aim to manage both environmental conservation and business growth by continually trying to enhance our environment management system (EMS) and environmental performance from a global point of view.
- **Business operation :**
We will promote environmentally friendly business activity to contribute to prevention of global warming, resource recycling, and biodiversity conservation throughout the entire life cycle of our products from procurement of the materials to disposal.
- **Cooperation with society :**
We will try to disclose information and to enhance communication for improving the trust of our stakeholders and deepening cooperation with society. We also try to enhance environmental consciousness by positively enforcing participation of all the employees in environmental conservation activities.

***1
PRTR substances**
Chemical substances designated in the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof. This Act stipulates a system of determining and notifying the amounts of specific chemical substances released into the environment.

***2
LCA**
Life Cycle Assessment. Method for quantitative and objective assessment of the environmental impact from all steps throughout the entire lifecycle of a product, including sourcing the raw materials, manufacturing, distribution, disposal, and recycling.

Environmental Action Plan

	Item	Fiscal 2015 Target	Fiscal 2011 Target
Environmental Management	Promote activities uniformly across the globe.	Formulate global ecological vision.	Sharing of environmental declarations and policies of the domestic groups with overseas factories Understanding of the current state of EMS in overseas factories Implementation of the new environmental management information system (SLIMOFFICE) in Japanese groups
	Promote environmental activities that lead to corporate management	Transparentize costs for energy and wastes, and construct a system to promote actions for reducing the costs.	Conversion of environmental loads, such as CO ₂ and wastes, to cost in Japanese groups
Business Activities	Reduce CO ₂ emissions	In comparison with 2007 Emissions: down 10% Emissions per unit production: down 8%	The domestic groups Emissions: 186,725 tons/year Emissions per unit production: 0.780 tons/1,000,000 yen
	Reduce generated volume of waste/valuable resources	In comparison with 2007 Emissions per unit production: down 30%	In comparison with 2010 Emissions per unit production: down 1%
	Reduce volume of water used	In comparison with 2007 Per unit production: down 8%	In comparison with 2010 Per unit production: down 4%
	Reduce PRTR substance*1 emissions	In comparison with 2007 Emissions: down 8%	Reexamination of a recycling equipment
	Develop environmentally friendly products	Expansion of LCA*2 to all the company's operation sites	Determination of the range of data collection Acquisition of required data
	Improve chemical substance control	Construction of a management system of chemical materials including supply chains	Examination of the management system of chemical materials Investigation of the status of chemical materials and storage of the data
	Promote green purchasing	Expansion of the green supplier system	Expansion of the green supplier system to the domestic related firms
	Recycle used products	Establishment of recycling technology for products and packaging materials	Examination of recycling technology of products Examination of the reuse of package materials
	Reduce CO ₂ emission from logistics activities	Japanese physical distribution energy per unit production: Down 8% in comparison with 2007	0.426kl/100,000,000 yen
	Environmentally friendly sales activities	Promotion of environmentally friendly sales activities	Proposal of environmentally friendly sales strategies Enrichment of PR relating to the environmental efficiency of our products
Social cooperation	Improvement of disclosing information	Improvement of disclosing global environmental information	Disclosure of the state of law abidance in overseas factories Acquisition of material data (procurement amount of raw materials and parts) in overseas factories
	Enhancement of communication	Enhancement of communication with communities	Continual implementation of the environmental conferences Acceptance of visitors to factories by stakeholders
	Enhancement of social contribution	Enhancement of social contribution for communities	Continual participation in EPOC international exchange subcommittee meetings Continual implementation of the clean-up activities Participation in a variety of environmental activities
	Enhancement of actions for biodiversity conservation	Enhancement of actions for biodiversity conservation	Planning of guideline relating to biodiversity Examination of activities for Satoyama (planted/managed natural woodlots) conservancy and cooperation with NPO/NGO and governments
	Enhancement of environmental consciousness	Enhancement of environmental education	Enhancement of level-specific training in the domestic groups Understanding of the implementation status of environmental education in overseas factories

Results of the entire NGK Spark Plug Group Eco Vision 2010

The entire NGK Spark Plug Group Eco Vision 2010 is a vision established in 2004 indicating the ideal status of environmental activities by this Group in 2010. Aiming to achieve this status, targets were set for each fiscal year to promote environmental activities, and it came to a close in March 2011.

The results of the fiscal 2010 targets and the results of the entire NGK Spark Plug Group Eco Vision 2010 are shown in the table below. Taking these results seriously, we have reviewed our seven-year efforts, and in 2011 formulated Eco Vision 2015 (P. 30) indicating our ideal status for 2015.

■ Results of fiscal 2010 Targets

Achieved : ○ Not achieved : ×

Item	Fiscal 2010 Target	Result	Evaluation	Page	
Management	Environmental management system	Implement sufficient environmental education in domestic business sites	×	—	
		Promote integrating EMS and QMS documents	×		
		Improve environmental impact assessment systems	○		
	Environmental operation	Work to revise and improve the collection and managerial methods of environmental data for operating organizations	Implemented the environmental management information system and improved the method of collecting environmental data and its management.	○	—
		Improve significant environmental aspects (emergency situations) and prepare for emergency situations [Zero environmental accidents]	Held regular drills to deal with emergency situations to prevent incidents and to minimize damage when they happen.	○	35
Factory/Office	Prevention of global warming	Total group emissions of carbon dioxide under 176,000 tons	×	37	
	Effective use of resources	Group's water reduction target: 9,755 m ³	46,075 m ³ reduction in volume of water used by the Group	○	40
		Group's waste reduction target: 794 tons	678 tons reduction in volume of waste generated by the Group.	×	39
		Incorporate a low environmental burdens disposal method	Changed subcontractor to one with less recycling residue.*1	○	—
Substances of environmental concern	Promote control (recovery, etc.) of VOC*2 released	Deliberated on VOC recovery equipment, but implementation was not possible.	×	41	
Products	Eco-design	Introduce LCA*3 methods into the product assessment	Implemented LCA in some products.	×	43
	Distribution	Efficiently transport products and waste (Reduce volume of cargo shipment by 1% from previous year)	Cargo shipment volume: 44,305,000 ton-km 15% up from previous year	×	38
Communication	Natural environment	Continue to participate in community environmental events, etc.	Factory and affiliates participated on their own in environmental events, cleaning activities, etc. hosted by local municipalities.	○	44
Mind	Education and training	Continue to implement environmental education	Continued to implement environmental education.	○	34

*1 Recycling residue
Residue from waste recycled in waste disposers, which will end up in final disposal (landfill).

*2 VOC
Volatile Organic Compounds. The source of photochemical oxidants and suspended particulate that pollute the atmosphere.

*3 LCA
Life Cycle Assessment. Method for quantitative and objective assessment of environmental impact made at all steps throughout the entire life cycle of a product, including sourcing the raw materials, manufacturing, distribution, disposal, and recycling.

■ Single fiscal year targets for CO₂, waste, and water

[Target for CO₂]

Reduction Targets had been set since fiscal 2006, but from fiscal 2009 and on, the target will be set on total emission volume.

[Target for wastes and water]

Reduction Targets set since fiscal 2006. Reduction Targets sets goals on the volume to be reduced by taking various measures. The advantage of this method

is that the results are more obvious, since the degree to which the target was achieved can be evaluated without being influenced by changes in production.

■ Results of the entire NGK Spark Plug Group Eco Vision 2010

Achieved : ○ Not achieved : ×

Item	Eco Vision	Results of the Eco Vision	Evaluation	Page	
Management	Environmental management system	Sharing of environmental policy by related companies including overseas companies	×	—	
		Construction of total management system (QMS, EMS, OSHMS)	×	—	
	Environmental operation	Centralization of environmental management data control	○	—	
		Promotion of CSR management	○	35	
	Environmental accounting	Integration of environmental accounting and management accounting	×	—	
Factory/Office	Prevention of global warming	Total greenhouse gas emissions in Japan of 150,000 tons or less (10% down from 2001)	×	37	
	Effective use of resources	Efficient use of water resources	Reduced volume of water used. Fiscal 2010 1,870,000 m ³ (3% down from 2003)	○	40
		EPR (extended producer responsibility) operations	Recycling after use was deliberated on for some products, but technological difficulties hindered implementation.	×	—
		Reduction of waste emissions	Reduced waste emissions. Fiscal 2010 16,819 tons (2% down from 2003)	○	39
		Reduced environmental load due to waste	Adoption of processing methods with less environmental load has progressed.	○	—
	Substances of environmental concern	Total 36 tons of PRTR substances*2 released (80% down from 2002)	Could not reduce release volume to 36 tons or less. Fiscal 2010 141 tons (20% down from 2002)	×	41
		Control substances of environmental concern	Implemented integrated control of MSDS*3 (non-consolidated).	○	—
Products	Eco-design	Eco-friendly design and product creation	×	43	
	Green procurement	Green supplier system of identification and registration of all our business associates	○	42	
	Distribution	Construction of efficient distribution systems	×	38	
	Eco-business	Development of eco-businesses	○	—	
Communication	Disclosure	Disclosure of clear environmental data	○	—	
		Continuous issue of CSR reports	○	44	
	Community	Support for and participation in NGO and NPO activities	○	44	
	Natural environment	Promotion of nature conservation and social contribution	○	44	
Mind	Education and training	Thorough education of eco-minded employees	○	34	
		Reflection of environmental performance in business evaluation	×	—	

***1 MFCA**
Material Flow Cost Accounting. Method of identifying costs by determining material costs, processing costs, and depreciation and amortization incurred by materials and energy losses (defective products, etc.) during production processes.

***2 PRTR substances**
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***3 MSDS**
Material Safety Data Sheet. Document stating hazardous properties of and cautions for handling chemical substances.

***4 Color Universal Design**
Designs using color schemes that can be easily identified by people with all types of color vision so as to convey information accurately to as many people as possible. This is used in this report for colors of texts as well as color schemes, line types and color-coding in charts and graphs.