Environmental Activities

The KOITO Group declares in the KOITO Group Corporate Behavior Charter, our basic policy of the corporate activities, that "guided by the theme of 'Eco-friendly Manufacturing for People and the Earth,' we will proactively engage in global environment conservation through our business activities."

Based on this policy, KOITO has established an Environmental Policy that sets out the framework for its environmental activities and implements that policy in the environmental management of all fields: development, design, production, procurement, logistics and others.

Moreover, our domestic and overseas subsidiaries also have established "Environmental Policy" as well as built environmental management systems. We are promoting environmental conservation activities throughout the KOITO Group.

Environmental Policy

KOITO MANUFACTURING CO., LTD. pursues "Eco-friendly Manufacturing for People and the Earth" in all business activities centered on automotive lighting by promoting environmental conservation activities;

- 1. To clarify our targets and measures for environmental conservation and continuously work to improve the KOITO Group's environmental performance,
- 2. To formulate and promote environmental improvement plans by considering environmental issues in advance in addition to complying with environmental laws and regulations,
- 3. To strive to develop and establish new environmentally friendly technologies and products throughout the product life cycle,
- 4. To minimize the environmental impact and use of resources and energy in the manufacturing process, promote environmental protection activities and prevent environmental problems from occurring,
- 5. To actively promote human resources development to achieve our environmental targets.

Environmental Management

Management Structure for Environmental Activities

KOITO convenes the monthly Safe and Environmental Committee chaired by the Representative Director to supervise environmental activities of the entire Group and to discuss and make decisions on important environmental issues and environmental conservation measures to be implemented under environmental laws and regulations.

Subcommittees and working groups, such as the Energy and CO₂ Reduction Subcommittee, Environmental Impact Substance Reduction Working Group, and Recycle Promotion Working Group, which were established to address specific environmental issues, are implementing specific activities.

These activities are reported to the Safe and Environmental Committee, which follows up on progress and discussing various actions.



Establishment of Environmental Management System

The KOITO Group is building the environmental management system for the entire Group. We are aggressively acquiring ISO 14001 and other environmental certificates primarily at our manufacturing sites. As of the end of March 2022, a total of 24 companies out of 25 eligible for certification have acquired environmental certificates: 12 in Japan, including KOITO MANUFACTURING, and 12 overseas. The KOITO Group also recommends major suppliers to acquire certificates, such as ISO 14001 and Eco-Action 21, in order to reinforce environmental management and conservation throughout the entire supply chain.

■KOITO's ISO 14001 certification in production sites



KOITO's environmental management is applied to the above five sites with respect to business activities related to the R&D, design, production, logistics, etc. of automotive lighting equipment, aircraft components and others. In addition environmental impact arising from the product life cycle are also applied to the management



Environmental Targets and Performance

To implement "Eco-friendly Manufacturing for People and the Earth" and promote environmental conservation activities effectively, KOITO has set quantitative medium-term targets and short-term targets every year for various indicators. The progress of activities is managed and the degree of achievement of targets is evaluated by the Safe and Environmental Committee and other bodies.

Environmental objectives		Priority efforts and performance in FY 2022				
		Priority	Target	Result	Main approaches from FY 2022	
o alleviate change	Contribution to low-carbon society	Reduction of CO2 from production	Amount of CO ₂ emissions: 16% reduction from FY 2014 (amount of CO ₂ emissions 61,900 t-CO ₂)	Amount of CO ₂ emissions: 23% reduction from FY 2014 (amount of CO ₂ emissions 56,700 t-CO ₂)	 Reduction of energy use and CO₂ emissions in production Amount of CO₂ emissions in FY 2031: 50% reduction from FY 2014 Achieve carbon neutrality by FY 2051 	
Measures t climate		Reduction of CO2 from logistics	Energy usage per unit: 1% reduction per year	2% increase from FY 2021	 Reduction of energy use and CO₂ emissions in logistics Energy usage per unit: 1% reduction per year Reduction of environmental impact substances in the product life cycle 	
and water lation	Development of recycle-oriented society	Reduction of the amount of waste	Waste generated per unit: 3% reduction from FY 2019	13% reduction from FY 2019	 Development of recycle-oriented society Reduction of amount of waste and effective utilization of resources in production Waste generated per unit in FY 2026: 7% reduction from FY 2019 	
Resource circu		Reduction of water consumption	Water usage per unit: 3% reduction from FY 2019	9% reduction from FY 2019	 (2) Minimization of water impact Reduction of water consumption Water usage per unit in FY 2026: 7% reduction from FY 2019 Improvement of wastewater quality management 	
Management and reduction of chemical substances	Reduction of environmental impact substances	Reduction of VOC emissions	VOC emissions: Less than the amount in FY 2019 (299 t) Target for FY 2022: 247 tons or less	192 tons (36% reduction from FY 2019)	 ⑦Reduction of environmental impact substances in production Amount of VOC emissions: Maintain the amount below FY 2019 (299 tons) ⑦Thorough management of environmental impact substances in products 	
ment	Reinforcement of global environmental activities	Promotion of the reinforcement of consolidated environment activities	Reinforcement of environmental risk management Thorough environment compliance	Identification of potential environmental risks and reinforcement of preventive measures (Identification of and response to near miss incidents)	Deinforcement of the worldwide	
al manage		Promotion of environmental efforts collaborating with suppliers	Promotion of aggressive environmental activities, improvement of environmental performance	Confirmation of management status and promotion of improvement through information sharing and on-site inspections	environmental management •Promotion of the reinforcement of consolidated management	
ironmenta		Disclosure of environmental information and enhancement of communication	Global disclosure of environmental information Promotion of mutual understanding with local communities	Disclosure of consolidated information Hosting round-table session with local communities	 Proactive disclosure of environmental information and enrichment of 	
ment of envi		Reinforcement of environmental education	Promoting compliance, employee education and awareness-raising activities	Reevaluation of education structure for manager, supervisor and newly hired employees Implementing training for contractors working in the premises	Reinforcement of environmental education Development of society in harmony with nature Promotion of biodiversity and nature	
Enrich	Development of society in harmony with nature	Promotion of biodiversity and nature conservation activities	Promotion of activities at individual offices and regions, and biodiversity conservation activities	Cooperation with local organizations and participation in activities with them Reinforcement of activities to prevent global warming and effectively use resources	CONSETVATION ACTIVITIES	

Environmental certification acquired in the KOITO Group

	Overseas subsidiaries		
KOITO KYUSHU		North American Lighting (U.S.A.)	
Aoitec	ISO14001	North American Lighting Mexico (Mexico)	
Shizuokadenso		NAL do Brasil (Brazil)	
Nissei Industries		Koito Europe (U.K.)	
Fujieda Auto Lighting		Koito Czech (Czech Republic)	
Shizuoka Wire Harness		GUANGZHOU KOITO (China)	
KOITO ELECTRIC INDUSTRIES		Hubei Koito (China)	
Haibara Machine and Tools		FUZHOU KOITO TAYIH (China)	
Shizuoka Kanagata		THAI KOITO (Thailand)	
Takeda Suntech		INDONESIA KOITO (Indonesia)	
Koito Transport		Ta Yih Industrial (Taiwan)	
		INDIA JAPAN LIGHTING (India)	

Material Balance

Energy and resource inputs and emissions (outputs) of greenhouse gas (GHG) and environmental impact substances such as VOC (Volatile Organic Compounds) in KOITO's business activities are as follows.

KOITO keeps track of the material balance in its business activities to verify and evaluate activities to reduce the environmental load and to use the data for the establishment of future measures.



*PRTR Act: Act to promote identification and management of specific chemical substances' released amount to the exterior environment.

Environmental Audits

KOITO conducts annual external environmental audits and internal environmental audits to check the operational status of the environmental management system. Improvement proposals are prepared and implemented to respond to the aspects identified through those audits to maintain and operate the proper management system.

External Environmental Audits

A registered external accreditation firm checks whether the environmental management system has been properly established and operated based on ISO 14001.

Internal Environmental Audits

To ensure the independence of internal environmental audits, an audit team composed of internal auditors other than the department being audited is organized, and audits are conducted based on ISO 14001. The internal auditors are also conducting audits at their departments for continuous improvements and enhance environmental awareness.

Environmental Education

KOITO has established an education system and periodically provides environmental education to promote training for human resources to achieve our environmental targets as stated in the Environmental Policy and help every employee gain a deep understanding of the environment.

In addition to education for specific job ranks, such as new employees, managers and supervisors, KOITO provides special education for internal auditors and promote our employees' acquisition of official licenses and qualifications. Moreover, June and July of every year are designated as KOITO Environmental Months during which employees participate in local clean-up activities and implement intensive environmental inspection to enhance the awareness of every employee. KOITO also provides education on preventing contamination and spillage to workers on the premises of KOITO, such as contractors, to enhance their awareness and prevent environmental accidents.



Safety and environmental education for the work conducted within the premises (2021)

Efforts throughout Supply Chain

KOITO is committed to promote measures to reduce environmental load based on the comprehensive perspective of the product life cycle to coexist with global environment and local communities and to engage in environmental activities through all business activities, including green procurement of raw materials, parts and equipments.

Aiming to materialize a sustainable society, KOITO is working to strengthen supply chain management. We hold annual procurement policy briefing session and monthly information liaison meetings for suppliers to encourage them to acquire environmental certifications, such as ISO 14001 and Eco-Action 21, and request compliance with environmental laws and regulations on environmentally hazardous substances.

In FY 2022, KOITO held a supplier meeting on May 17, 2021 and 204 suppliers attended it.

Compliance with Environmental Laws and Regulations

KOITO conducts thorough risk management, such as specifying the sources of environmental risks, detecting abnormalities in the early stages through regular measurements, and establishing emergency response measures to minimize environmental risks by complying with environmental laws and regulations, such as ones to prevent air pollution, water contamination and soil contamination.

Through these risk management activities, KOITO makes sure that emissions, water quality, noise, soil and groundwater contamination are within the ranges permitted under laws, regulations and standards. In FY 2022, neither violations of environmental laws and regulations nor fines were reported at the KOITO Group.

The KOITO Group is committed to compliance with environmental laws and regulations, and continue to work on environmental risk management.



Education for internal environmental auditors (2019)



Procurement policy briefing session (2019)

Environmental risk management to comply with environmental laws and regulations

	Procedures			
	Identification of sources	 Identification of facilities and equipment which may cause environmental pollution in case of malfunction 		
	Source management	•Scheduled inspection and repairing risk identified facilities or equipment •Elimination of environmental near miss incidents and prevention of recurrence		
	Setting self-management standards	•Setting self-management standards that are stricter than legal regulations		
	Daily inspection (monitoring and measurement)	 Management within the self-management standards (implement preventive measures before the standards exceed legal regulations) 		
	Setting emergency response procedures	 Setting the abnormality handling procedures Setting procedures to notify nearby residents and public agencies 		
	Implementation of training to handle abnormality	•Implementation of periodic training		

Reduction of Greenhouse Gas Emissions

In order to contribute to materialize a decarbonized society, KOITO is promoting the introduction of plant buildings and energy-saving manufacturing facilities that emit less CO₂ with the goal of achieving carbon neutrality in FY 2051. Furthermore, we are working company-wide to reduce CO_2 emissions throughout the product life cycle, promoting products' power conservation, size reduction and weight reduction from the development and design phase.

Efforts in the Production Process

To improve energy and production efficiency in the production process. KOITO is reducing CO₂ emissions by improving work methods and updating facilities, such as updating to higher-efficiency transformers and air conditioners, installing energy-efficient facilities, automatic power shutdown systems to kick in when facilities are not in use, and optimizing production lines.

We are promoting several activities with the goal of reducing CO₂ emissions by 50% from FY 2014 by FY 2031 and achieving carbon neutrality by FY 2051.

Factories in Japan were streamlined by integrating production lines and conducting improvement work that resulted in improved productivity and energy efficiency. With this effort, the amount of KOITO's CO2 emissions in FY 2022 was 56.7 thousand tons, 23% decrease from FY 2014.



■Amount of CO₂ emissions*

Amount of emissions

20

15

10

(thousand tons of CO₂)

0.148

2018

*The amount of CO₂ emissions are calculated by using CO₂ emission factor of each electric power company for electricity, and using the factors based on the Act on Rationalizing Energy Use and the Act on Promotion of Global Warming Countermeasures for city gas, LPG and heavy oil.

■Amount of CO₂ emissions and energy usage per unit in logistics

Amount of CO₂ emissions

0154

2021

0.157

2022 ((

Energy usage per unit*

0.148

2020

0 1 4 4

2019

Emissions intensity

(kl per billion ven

0.146

2026 (Target)

-0.2

0.1

(FY)



Reducing CO₂ Emissions by Introducing Renewable Energy / India Japan Lighting Private Limited (IJL/India)

IJL reduced annual CO₂ emissions by 13% through installing solar panels at the Bawal Plant and purchasing renewable energy, including wind and solar power, at the Chennai Plant.





Solar panels at Bawal Plant

Reducing Electricity Consumption by Using LEDs / THAI KOITO COMPANY LIMITED (THAI KOITO/Thailand)

THAI KOITO has promoted the use of LEDs instead of metal halide lamps, which were conventionally used for on-site passageway lighting. As a result, they have achieved to reduce annual electric power consumption of on-site passageway lighting by 66%.





Plant lighting

Metal halide lamp

Reducing Water and Gas Consumption through Intermittent Operation of Boiler Facilities / North American Lighting Mexico (NAL Mexico/Mexico)

The four boilers at NAL Mexico's production plants were operated in a manner that shifts to high combustion conditions at high loads and to low combustion conditions at low loads, and was resulted in energy loss. With the aim of reducing energy consumption, NAL Mexico switched the operation to intermittent operation control,

in which the boiler can automatically stops according to the operating rate. They have achieved reducing annual water consumption by 8% and annual gas consumption by 18%.

■Boiler system diagram Plant

.8				- operation stat	
	Boiler			Operating ratio 20%	
	No.1		No.1	Low combustion	
			No.2	Low combustion	
			No.3	Low combustion	
	No.2		No.4	Low combustion	
-	No.3	■Boiler operation statu (after improvement)			
				Operating ratio 20%	
			No.1	Low combustion	
	No.4		No.2	Non-operation	
			No.3	Non-operation	
Boiler room			No.4	Non-operation	

Please refer to the Growth Strategies from P.20 to P.21 of this report.

Efforts in Logistics

The logistics of KOITO are mainly conducted by freight trucks. A domestic subsidiary, Koito Transport, is mainly carrying out the logistics operations.

Koito Transport acquired the Green Business Certificate in February 2004. Collaborating with KOITO, Koito Transport aims to operate environmentally friendly transport business by reducing environmental impacts focusing on reducing the energy consumption of freight trucks, CO₂ emissions, and waste emitted through the logistics process.

In FY 2022, the amount of CO₂ emissions from the entire logistics operation of KOITO was 12,300 tons and energy per unit* was 0.157 kl per billion yen.

*Energy usage per unit: Amount of energy (kl in crude oil equivalent) consumed in logistics per unit in sales (billion yen).





Purchasing renewable energy at Chennai Plant

LED lighting

-			
Operating ratio 40%	Operating ratio 60%	Operating ratio 80%	Operating ratio 100%
High combustion	High combustion	High combustion	High combustion
Low combustion	High combustion	High combustion	High combustion
Low combustion	Low combustion	High combustion	High combustion
Low combustion	Low combustion	Low combustion	High combustion

■Boiler operation status (before improvement)

	u	5	
ï			

After introducing a control system that can automatically stops the boiler

	· · · · · · · · · · · · · · · · · · ·		
Operating ratio 40%	Operating ratio 60%	Operating ratio 80%	Operating ratio 100%
Low combustion	High combustion	High combustion	High combustion
Low combustion	Low combustion	High combustion	High combustion
Non-operation	Low combustion	Low combustion	High combustion
Non-operation	Non-operation	Non-operation	Low combustion

Reduction of Environmental Impact Substances

To reduce environmental impact substances and waste, KOITO commits in its Environmental Policy to strive to "develop and establish new environmentally friendly technologies and products throughout the product life cycle" and "minimize the environmental impact and use of resources and energy in the manufacturing process," and promoting relevant activities.

KOITO has set quantitative reduction targets for VOC emissions in the midterm priority activities. Activities are being implemented to reduce emissions while checking progress.

We will continue to actively engage in reducing environmental impact substances by promoting "Eco-friendly Manufacturing for People and the Earth."

Efforts in Production Processes

Some raw materials, such as paints and chemicals, as well as secondary materials used in the production processes, contain chemical substances that have negative environmental impacts. KOITO is reducing these environmental impact substances by reinforcing the management of the amount to use and emit, improving consumption efficiency, and using alternative substances.

244.0 to

Management of Chemical Substances Regulated under the PRTR Act

Amount of released and transferred chemical substances regulated under the PRTR Act in FY 2022

KOITO is keeping track of the amount of chemical substances regulated under the PRTR Act handled or transferred in the production processes while managing them appropriately as well as reducing the amount to use and replacing them with alternative substances.

In FY 2022, KOITO have handled six substances subject to PRTR Act (Class 1 designated chemical substances), including toluene and styrene. The amount of these substances handled was 244.0 tons, and the amount of atmospheric emissions and transfers as waste was 75.8 tons.

Reduction of VOC (Volatile Organic Compounds)

As a target for FY 2026. KOITO is working to maintain VOC emissions below 299 tons, the amount in FY 2019, a base year, and to further reduce emissions per unit^{*1}.

In FY 2022, VOC emissions were reduced by 36% compared to FY 2019. In addition, we have achieved 13% reduction in emissions per unit compared to FY 2019.

In addition, KOITO has not used the three major hazardous air pollutants^{*2} since we had eliminated its use in March 2003.

*1 VOC emissions per unit: The amount of VOC emissions (kg) per production in monetary amount (million ven)

*2 Hazardous air pollutants: Dichloromethane, trichloroethylene and tetrachloroethylene



Resource Conservation and Recycling

Throughout our product life cycle, KOITO is actively working to effectively use raw materials, energy and other resources, and to reduce water consumption and waste.

The KOITO Group will continue to actively promote "Eco-friendly Manufacturing for People and the Earth," and strives to materialize a recycle-oriented society.

Effective Use of Water Resources

Recognizing the importance of water resources in production activities and the risks that future economic growth, population growth, and climate change would have effect on water resources. KOITO has identified "conservation of water resources" as one of our materiality. KOITO is working on the effective use of water resources and protecting water quality.

We have set our target for water consumption per unit of production*, to reduce 7% from the amount in FY 2019 (3.51 tons per million yen) by FY 2026, and we are promoting activities aimed at further reductions.

We have worked to enhance the awareness of employees toward water conservation and improving the efficiency of water consumption in the production processes. As a result, the water usage per unit in FY 2022 was 9% lower and the amount of water consumption was 22% lower than FY 2019.

KOITO is also conducting water quality monitoring on the wastewater discharged from production sites to prevent water pollution in rivers or other bodies of water into which production sites wastewater is discharged.

*Water usage per unit: The amount of water consumption (tons) per production output (million ven)



Amount of wastewater and wastewater per unit



Efforts in Reducing Wastes and Recycling

KOITO is working on efficient recycling of materials (including waste, valuable materials and recycled materials) discharged from all plants. After achieving zero-waste* in all plants in 2002, KOITO has been promoting waste reduction by setting the waste generated per unit as an index for recycling, mainly of plastics, and for efficient use of resources in production.

*Zero-waste: A situation in which no waste is directly disposed of as landfill within the waste discharged by the plant.

Efforts to Reduce the Amount of Waste from Production Sites and the Waste Generated per Unit

KOITO generated 5,293 tons of waste from plants in FY 2022, among which 2,297 tons were processed as waste*1.

KOITO is promoting activities with the aim of further reducing waste per unit^{*2} by 7% from the unit in FY 2019 (0.128 tons per billion yen), a base year, as a target by FY 2026.

The waste generated per unit (the amount of waste per production output) was 0.120 tons per billion yen in FY 2022, which was 34% lower than FY 2019 due to the continuous efforts to reduce the loss of defective resins.

*1 Waste: Generated material that requires processing costs, and the

processing is outsourced to disposal businesses contractors *2 Waste generated per unit: The amount of waste (tons) per production

output (million yen)

Promotion of recycling

KOITO is working to improve the recycling rate (reduction of heat-utilizing waste, etc.). In FY 2022, the amount recycled was 4,985 tons, maintaining a recycling rate of over 90%.

■Amount of emissions and waste (per unit) from production sites



■Amount of waste discharged at plants (FY 2022)



External Evaluation on Our Environmental Activities

KOITO evaluates its own initiatives by identifying key domestic and overseas external indicators and evaluations, and analyzing the results. We are actively disclosing information by responding to external evaluations, including ESG (Environmental, Social and Governance) rating agencies.



In January 2022, the CDP Climate Change Report 2021, a survey of global companies on their strategies for climate change and specific greenhouse gas emissions, was published by the U.K. nonprofit organization CDP (formerly known as the Carbon Disclosure Project).

KOITO received a "B-(Management)" rating in recognition of its efforts to address climate change, such as reducing CO₂ emissions and setting medium- to long-term targets, as well as its disclosures.

Disclosures According to the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)

Amid the increasingly severe impacts of climate change around the world, the Financial Stability Board established TCFD in December 2015 in response to a request from the G20.In June 2017, TCFD issued TCFD Recommendations, which require companies and others to disclose information on the risks and opportunities that climate change may have on their company based on four themes.

In December 2021, KOITO has signed up to support the TCFD and is actively promoting activities to reduce CO₂ emissions and disclose related information in order to materialize carbon neutrality in FY 2051.

We will continue to analyze the risks and opportunities that climate change may pose to us and identify their impacts, and will work to further enhance information disclosures.

■Items Recommended for Disclosure by TCFD and KOITO's Compliance

Recommended Disclosures	
Governance a)The board's oversight of climate-related risks and opportunities b)Management's role in assessing and managing climate-related risks and opportunities	The KOITO G through discu contribute to KOITO conv Representativ and to discuss environmenta laws and regu CO ₂ Reduction Working Grou address specif These activiti- follows up on
Strategy	
 a) The climate-related risks and opportunities the organization has identified over the short, medium, and long term b) The impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning c) The resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario 	We will analyz have on KOIT
Risk Management	Departments
 a) The organization's processes for identifying and assessing climate-related risks b) The organization's processes for managing climate-related risks 	measures to r Department is Procurement Environment department a assigned resp on individual
c)How processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	the Board of E administration direction of th
Metrics and Targets	【Target for FY
a)The metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process	•CO2 emission (Monitoring n •Scope 1 (dire
b)Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks	Result for FY •Scope 1 CO ₂
c)The targets used by the organization to manage climate-related risks and opportunities and performance against targets	•Scope 2 CO ₂ We are curren



roup identifies materiality including "prevention of global warming" issions at the Board of Directors and promotes business activities that materialize a sustainable society. renes the monthly Safe and Environmental Committee chaired by the e Director to supervise environmental activities of the entire Group and make decisions on important environmental issues and l conservation measures to be implemented under environmental lations. Subcommittees and working groups, such as the Energy and n Subcommittee, Environmental Impact Substance Reduction up, and Recycle Promotion Working Group, which were established to ic environmental issues, are implementing specific activities. es are reported to the Safe and Environmental Committee, which progress and discussing various actions.

e and disclose the risks and opportunities that climate change may O in the future based on climate-related scenarios and other factors.

are assigned to risk management, including the implementation of educe and avoid risks and daily management. The Quality Assurance s assigned risks associated with the safety of products, the Headquarters handles risks in the supply chain, and the Safety Department handles risks of natural disasters. As such, each ssess relevant risks and implement preventive measures. Officers of onsible departments act as the general managers. In addition, training risks is provided to employees.

me actual problems, the basic protocol is to report the incidents to Directors, the highest decision-making entity of the business n, and such problems are swiftly and properly handled under the e top administrators.

2031 s (Scope 1+2): 36,900 tons (50% decrease from FY 2014) netrics]

ct) and Scope 2 (indirect) CO₂ emissions

2022] emissions: 12,900 tons emissions: 43,700 tons ntly in the process of calculating Scope 3 CO₂ emissions.