



**ENVIRONMENTAL REPORT 2024**  
**(2023.4~2024.3)**



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## Editorial Statement

### Information Disclosure

Denyo Co., Ltd. will use the media shown below to disclose information to all stakeholders, including customers and shareholders about its environmental initiatives aimed at delivering a sustainable society.

【Annual Environmental Report】



【HP】

<https://www.denyo.co.jp>



### Reporting Period

Fiscal 2024 (April 2023 to March 2024) and for some content, the periods before and after.

### Publication Date

October 2024

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### Disclaimer

This Environmental Report may contain predictions or forecasts about the future. Actual results may vary from forecasts due to a variety of factors.

# Management



## Message from the President



Thank you very much for reading our Environmental Report.

In recent years, extreme weather events are occurring around the world on an unprecedented scale, and calls for initiatives to combat climate change a part of business activities are gathering momentum day by day.

On the other hand, persistent geopolitical risks are giving rise to ever-increasing global energy instability, which, coupled with worldwide initiatives for carbon neutrality, is leading to even greater pressure for initiatives to encourage more widespread use of renewable energy.

Under these circumstances, we committed in our Medium-term Management Plan “Denyo 2026” to a sales target for decarbonized products of 3 billion yen. We will continue to engage in ecologically responsible activities and, with a view toward the creation of new added value for the establishment of a sustainable society through the provision of power sources, we will focus on the development and mass production of diverse products including hydrogen mixed combustion generators, fuel cell portable generators, and battery products.

We appreciate your continued understanding and support.

October 2024

Takanori Yoshinaga,  
President

## Environmental Philosophy

As well as contributing to social infrastructure upgrades worldwide through our power source products, Denyo is profoundly aware of its corporate social responsibility to conserve the environment, and tirelessly promotes environmentally sound business activities.



Fukui Plant

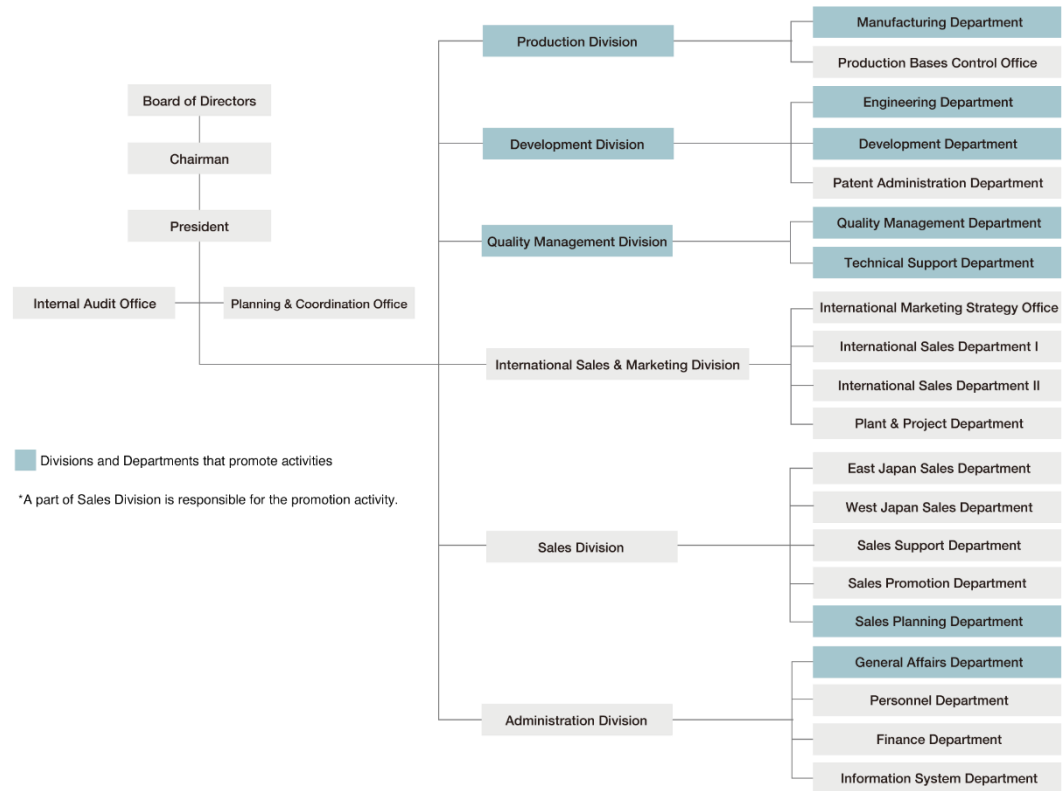
## Environmental Policies

1. In our business activities, we strive to prevent pollution and to promote eco-friendly products while seeking ways to maintain a healthy environment by conserving materials and energy, cutting back on solid waste, and reducing odors and noise.
2. We comply with environmental regulations and other agreed requirements, and we respect related demands from society.
3. As well as building a system of management which is based on the ISO14001:2015 to engage with environmental conservation and finding ways to make continual improvements, we set environmental goals and targets, and improve environmental performance by carrying out reviews.
4. As well as documenting the environmental policies to inform employees and everyone who works on behalf of the company, including the requirements of stakeholders, we disclose the information in the public domain on our homepage.
5. We strive to achieve environmental targets by continually improving the effectiveness and efficiency of the process.

# Environmental Management Structure

## ◆ Promotion System

Denyo is carrying out promotion activities aimed at reducing the total environmental impact by the following promotion Dept. intensively.



## ◆ ISO14001 Certification

Denyo has established an environment management system (EMS) with the president as the system manager and obtained ISO14001:2015 certification. While ensuring smooth operation of the EMS, we evaluate the environmental impact of our business activities, set concrete targets and an annual plan for important issues, and perform environmental load reduction and environmental risk prevention activities through the promotion of resource and energy saving.

# Environmental Targets and Achievements

To implement environmental management, we set targets for each fiscal year and carry out evaluations from time to time.

	FY2024 Target	FY2024 Achievements	FY2025 Target
Develop products with high environmental performance	Develop carbon neutral products (Develop at least one line of environmentally friendly products)	Developed a generator compliant with the second set of emissions standards of the International Maritime Organization (IMO).	Develop carbon neutral products (Develop at least one line of environmentally friendly products)
Formation of a recycling-based society	Cut the volume of crude oil equivalent energy consumption per output by 1.28 l/million yen or more compared to FY2023 levels	6.9L/million yen reduction* * The amount of LPG decreased due to the improved production efficiency of new coating equipment and energy-saving measures.	Cut the volume of crude oil equivalent energy consumption per output by 1.28 l/million yen or more compared to FY2024 levels
	Cut the volume of industrial waste per output by at least 0.13kg/million yen or more compared to FY2023 levels	0.07kg/million yen increase	Cut the volume of industrial waste per output by at least 0.13kg/million yen or more compared to FY2024 levels
Contribute to society	<ul style="list-style-type: none"> <li>Carry out cleaning on a regular basis at each business facility and schedule maintenance in green belts</li> <li>Community contribution activities</li> </ul>	<ul style="list-style-type: none"> <li>Cut grass and weeded in and around plant sites</li> <li>Cleaned drainage channels and pits</li> <li>Plant flowers in season and increase planters</li> <li>Carry out cleaning activities on roads surrounding the premises</li> </ul>	<ul style="list-style-type: none"> <li>Carry out cleaning on a regular basis at each business facility and schedule maintenance in green belts</li> <li>Community contribution activities</li> </ul>



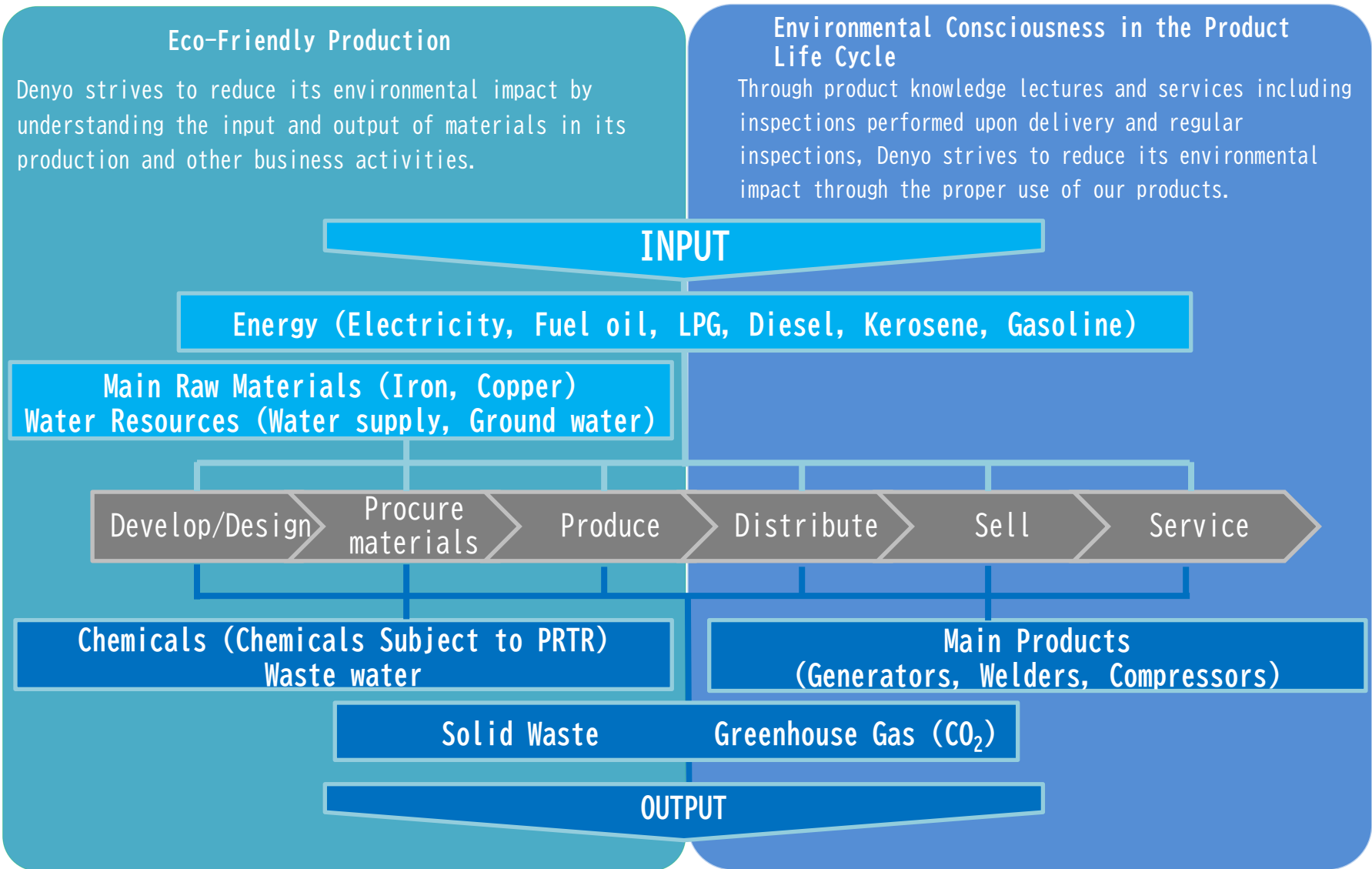
# Overview of Environmental Impact in the Value Chain

## Eco-Friendly Production

Denyo strives to reduce its environmental impact by understanding the input and output of materials in its production and other business activities.

## Environmental Consciousness in the Product Life Cycle

Through product knowledge lectures and services including inspections performed upon delivery and regular inspections, Denyo strives to reduce its environmental impact through the proper use of our products.



## Environmental Accounting

We quantitatively manage the implementation of our environmental conservation activities through environmental accounting and use the results to ensure efficient and effective environmental conservation activities.

(We use a unique tabulation system for environmental accounting developed while referencing the Environmental Accounting Guidelines 2005 from the Ministry of the Environment.)

Category		Contents	Expenses (thousands of yen)
Business area cost	Pollution prevention cost	Cost of environmental measurements (water quality, odor, vibration, noise, smoke, etc.)	4,405
	Global environmental conservation cost	CFC equipment disposal cost	7,028
	Resource circulation cost	Waste disposal cost	20,665
Upstream/downstream cost			0
Environmental activities cost		Green maintenance and management costs, environment-related equipment inspection and maintenance costs	10,499
Social activities cost		Donations for the 2024 Noto Peninsula Earthquake	3,000
Environmental remediation cost			0
			Total 45,593

## Environmental risk management

Denyo assumes the environmental risks of a sudden accident or disaster, etc. that may occur during our business activities and implements regular education and training for the purposes of the prevention of, early action against, and mitigation of such situations.

We are confirming the appropriate response and making continuous improvements while looking back on past cases.

### ◆ The Emergency Response Education and Training



(Fukui Plant)

Checked mitigation materials for emergency situations and explained how to use them.



(Shiga Plant)

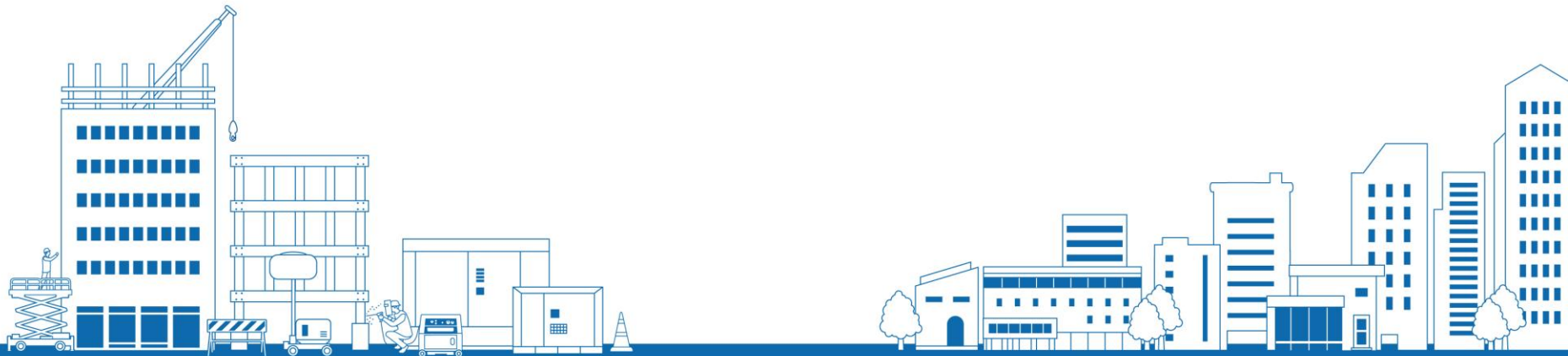
Emergency response training for hazardous substances  
(Raised awareness about hazardous material management)



(Laboratory & Training Center)

Fire extinguisher training

# Eco-Friendly Products





## Developing Products with High Environmental Performance

### ◆ Backpack-Style Battery Welder “WELZACK” BDW-120BP

WELZACK is a welding machine powered by lithium-ion batteries and designed to be worn as a backpack.

This highly convenient backpack-style battery welder allows the operator to move around easily doing work, and also produces no noise or exhaust fumes.

WELZACK uses HIKOKI brand lithium-ion batteries, which can also be used with other power tools.

By promoting the sale of this product, Denyo will contribute to the realization of carbon neutrality.



### ◆ Fuel Cell Portable Generator FCTP-7000

Recognizing that fuel cells using hydrogen for power generation are an effective means of reducing CO<sub>2</sub> emissions, our company has been developing and conducting verification tests on mobile fuel cell generators since 2019.

Based on the insights gained from these tests, we have independently developed a cooling structure for the fuel cell module and achieved a design that is 20% smaller and lighter by volume. This compact and lightweight design improves portability, facilitating smooth transportation and easy setup at outdoor sites, thereby enhancing operational efficiency.

By stepping up efforts for the mass production of this product, we will contribute to the realization of a hydrogen society.



<Verification tests model>

<Mass-produced model>  
FCTP-7000

# Conservation of biodiversity and ecosystem

Denyo has enhanced its lineup of models incorporating Eco Base, which prevents oil and other leaks from the machine in unexpected situations.

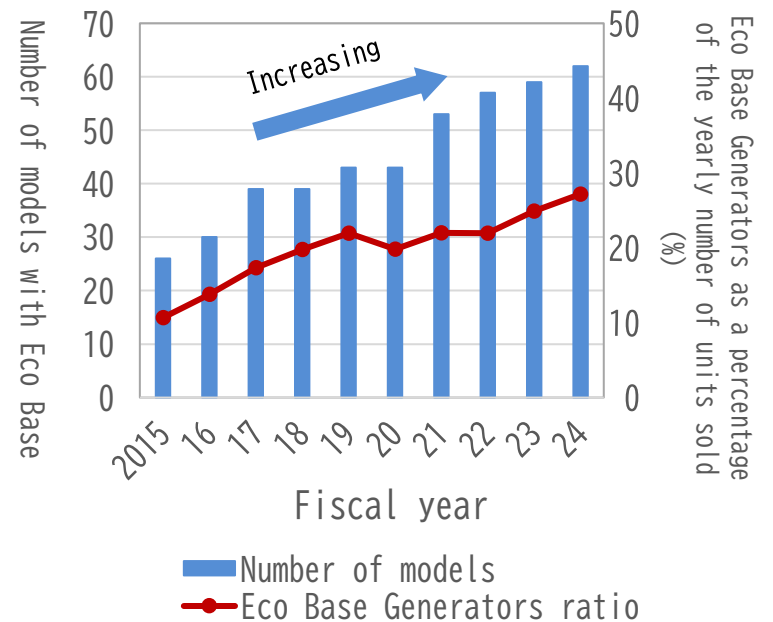
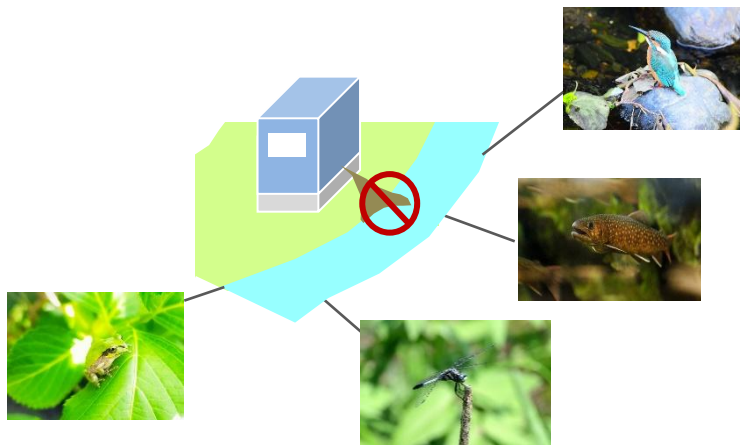


「Eco Base」

It prevents fuel, oil or coolant inside the machine from leaking, because Eco Base can receive it.

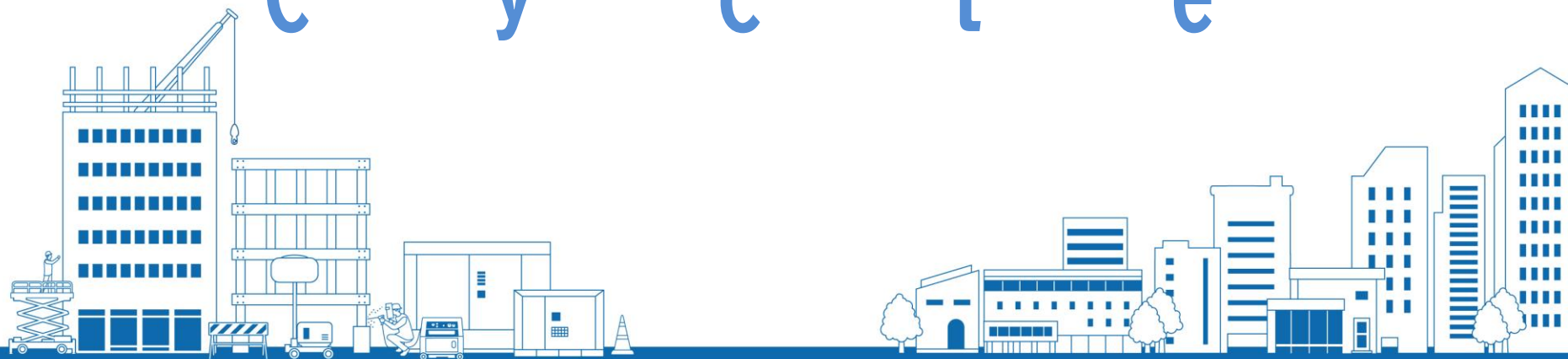


If an oil or other leak of oil from the machine is prevented, it will reduce the burden on the environment and conserve biodiversity and ecosystems.



Our customers have selected these models, appreciating the strong lineup of Eco Base models as the market becomes more aware of the environment.

# Environmental Consciousness in the Product Life Cycle



## After-Sales Service Initiatives

Approximately 90% of CO<sub>2</sub> emissions in the life cycle of construction machinery is generated while the products are being used.

In addition, there is the risk that an unexpected accident during use may cause environmental pollution. Denyo believes that it is important to promote eco-friendly products and provide after-sales services to ensure users have the correct knowledge to operate our products safely.



Guidance on product maintenance and use after delivery (emergency generators)



Training in product knowledge

### ◆ Training for the service staff of domestic group companies and rental companies

Providing after-sales services requires a variety of skills and knowledge.

We have been working to establish a robust service network that consists of not only our service staff but the staffs of our group companies and rental companies.



## After-Sales Service Initiatives



Operation of an installed power generator(Singapore)



Introducing a customer to a new product (Singapore)

### ◆ Training sessions for the service staffs of overseas subsidiaries and overseas rental companies

Since our products are used in more than 150 countries worldwide, we have been working to enhance after-sales service programs overseas.

We will continue to provide training to the service staffs of overseas subsidiaries and rental companies while also seeking to build trust-based relationships to increase sales.

# Eco-Friendly Production



# Global Warming Prevention

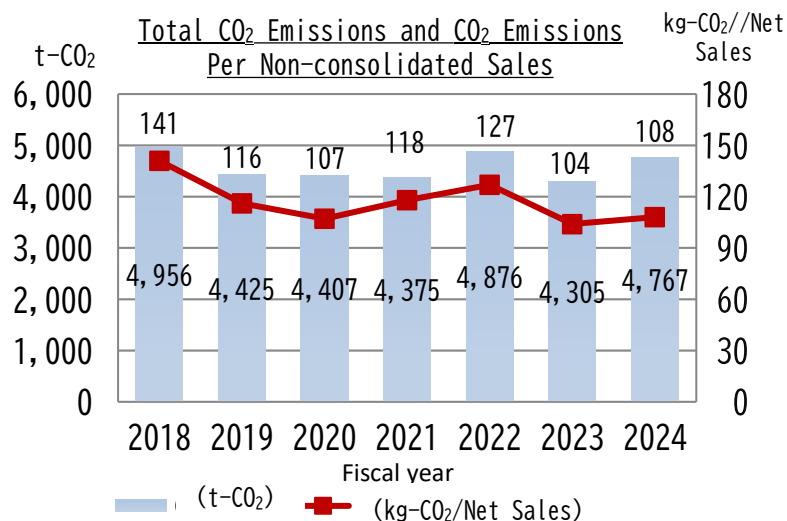
## ◆Reduce CO<sub>2</sub> Emissions

Denyo endeavors to prevent global warming through initiatives to reduce CO<sub>2</sub> emissions generated by its business activities.

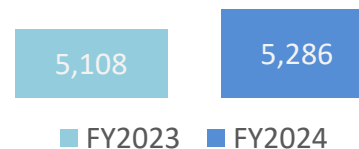
In FY2024, 4,767 tons of CO<sub>2</sub> was emitted Partly due to the effect of a year-on-year increase in the CO<sub>2</sub> emissions factor(\*) published each year by electric power companies, CO<sub>2</sub> emissions increased 10.7% from the level in the previous year and emissions in terms of sales volume rose 3.8%.

Denyo will continue to reduce CO<sub>2</sub> emissions.

\* CO<sub>2</sub> emissions from electricity consumption = Electricity consumption × Emissions factor published by each electric power company

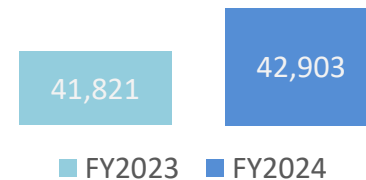


Power consumption (thousand kWh)



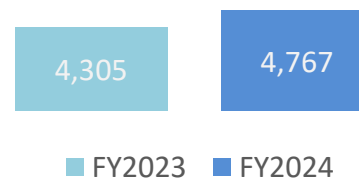
Change from FY2023 +3.5%

Fuel consumption (GJ)



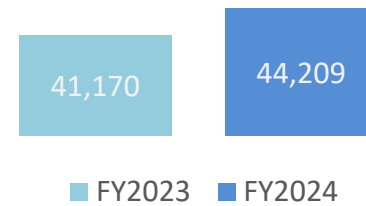
Change from FY2023 +2.6%

CO<sub>2</sub> emission after conversion (t)



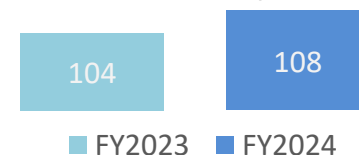
Change from FY2023 +10.7%

Net Sales (Millions of yen)



Change from FY2023 +7.4%

CO<sub>2</sub> emissions (kg) / Non-consolidated sales (Millions of yen)



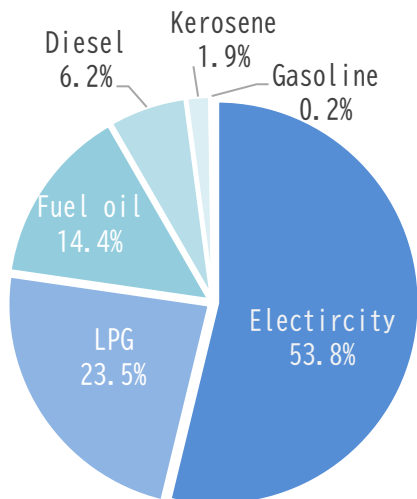
Change from FY2023 +3.8%

## Formation of a Recycling-based Society

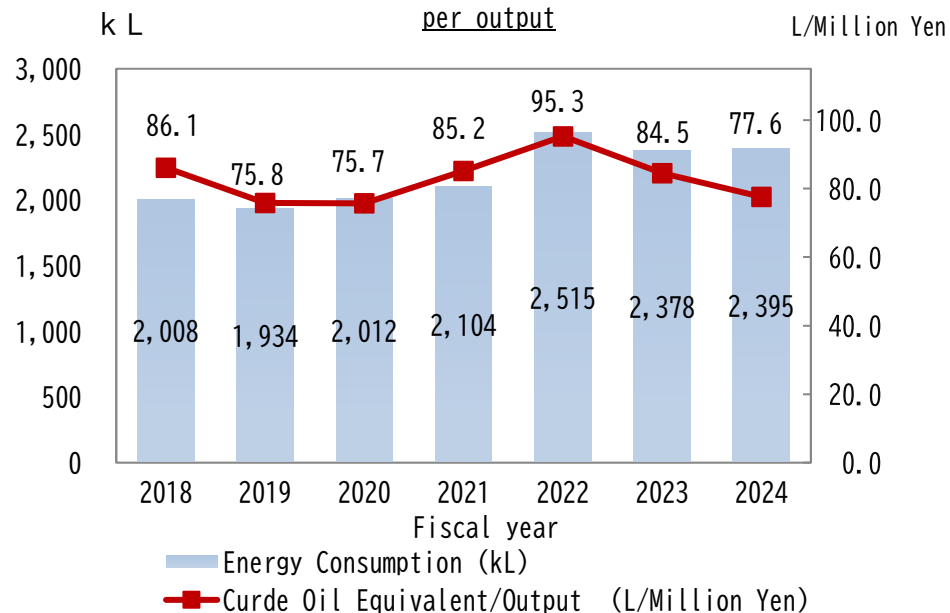
### ◆ Energy Consumption reduction

The volume of crude oil equivalent energy used per output in FY 2024 was 77.6 L/million yen, which is a decrease of 6.9 L/million yen from the level in the previous year. This reflected the improvement of production efficiency due to the new coating equipment, as well as successful reduction of LPG and electricity consumption despite increased production through energy saving measures. We will continue working to improve by increasing the efficiency of production equipment operations.

Breakdown of Energy Consumption  
(Crude Oil Equivalent)



Energy Consumption and Crude Oil Equivalent  
per output



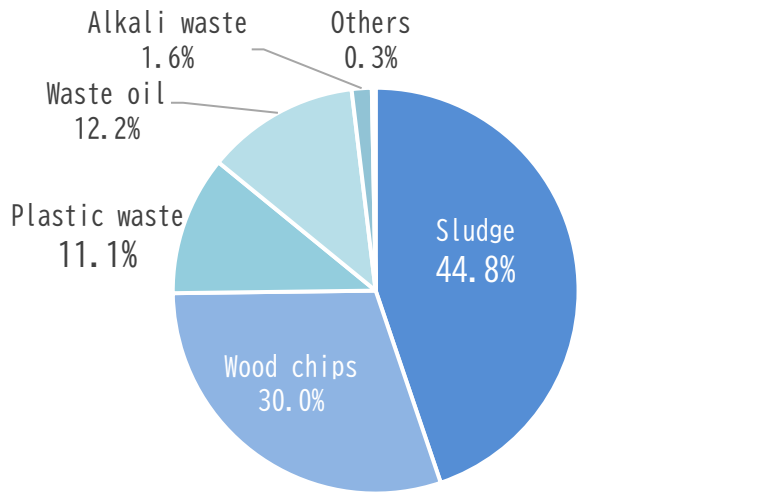


## Formation of a Recycling-based Society

### ◆ Reduce Solid Waste

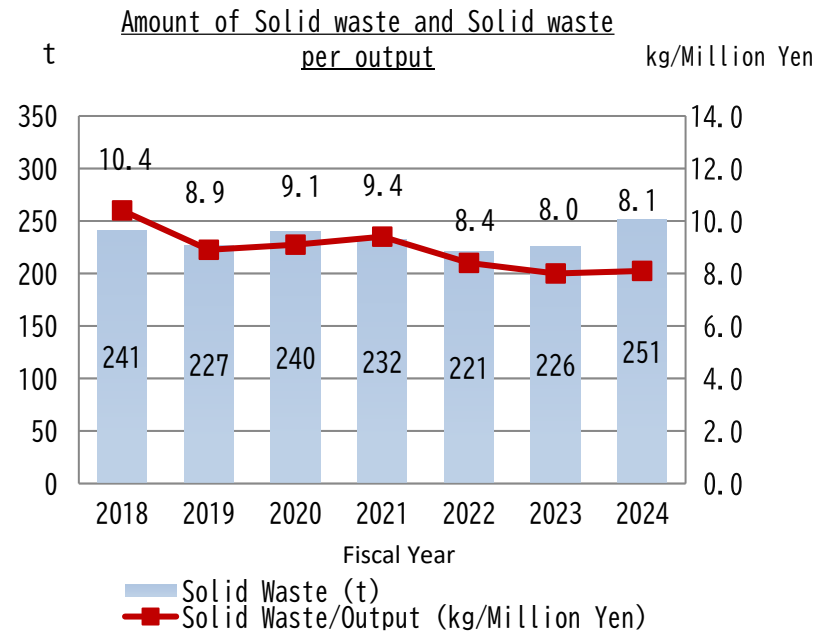
We manage and process solid waste appropriately and in compliance with all laws and ordinances. In FY2024, our solid waste per output was 8.1 kg/million yen, up by approximately 0.1 kg/million yen compared to the previous year. This was due to an increase in irregular waste (disposed of when a certain amount has collected).

We are also working toward to implement initiatives to reduce a certain amount or more of Solid Waste stably.



Breakdown of Total Solid Waste

\*Total for the Fukui and Shiga Plants



## Formation of a Recycling-based Society

### ◆ 3Rs Activities

In recent years, there have been problems with the depletion of resources such as petroleum, which are essential for our daily lives, and the shortage of final disposal sites for garbage. The importance of 3Rs (Reduce, Reuse, Recycle) has been increasing.

Denyo implements a range of initiatives to make effective use of limited resources and minimize the impact on the environment. We will now introduce some of these activities.

### Reduce / Reuse

Denyo changed from wooden pallets to iron pallets on the loading platforms used to transport products and other goods. The disused wooden pallets were taken by companies that use wooden pallets, through which 1,743 wooden pallets were recycled in FY2024. This resulted in a waste reduction of approximately 30 t.

### Recycle

The wood chips generated in the production process were all recycled. 38% of sludge, waste plastics, and waste alkali was recycled as cement materials.

This resulted in recycling of approximately 132 tons of waste, which is 53% of the total, 251 tons of waste, as new raw materials in FY2024.



wooden pallets



iron pallets

## Managing Chemicals

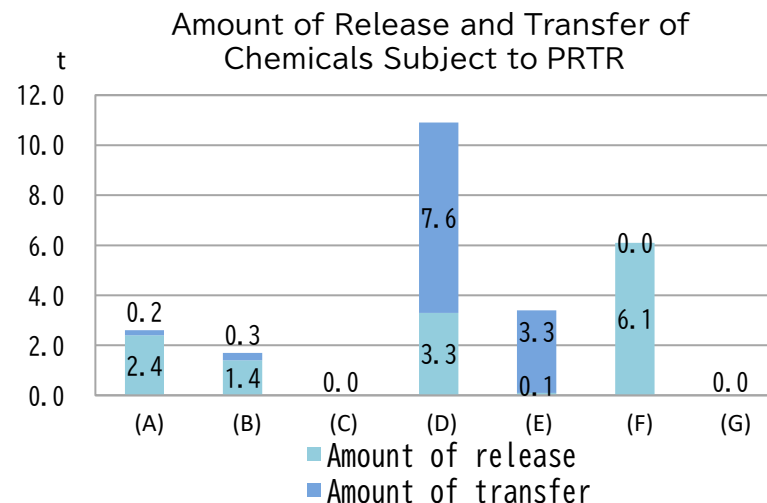
### ◆ Managing Chemicals Subject to PRTR

Based on the PRTR Law, we compile and release data on chemicals subject to the PRTR including amounts released into the environment or transferred as solid waste.

\*A Pollutant Release and Transfer Register (PRTR) is a system for compiling and disclosing data on hazardous chemical substances including their sources, how much is released into the environment or transferred off-site with solid waste.

Substance	Amount released to the atmosphere	Amount of transfer
(A) Xylene	2.4	0.2
(B) Toluene	1.4	0.3
(C) Ethyl benzene	0.0	0.0
(D) Methylene chloride	3.3	7.6
(E) Tetrahydromethyl phtalicanhydride	0.1	3.3
(F) Syrene	6.1	0.0
(G) 1,2,4-trimethylbenzene	0.0	0.0

(Unit: t)

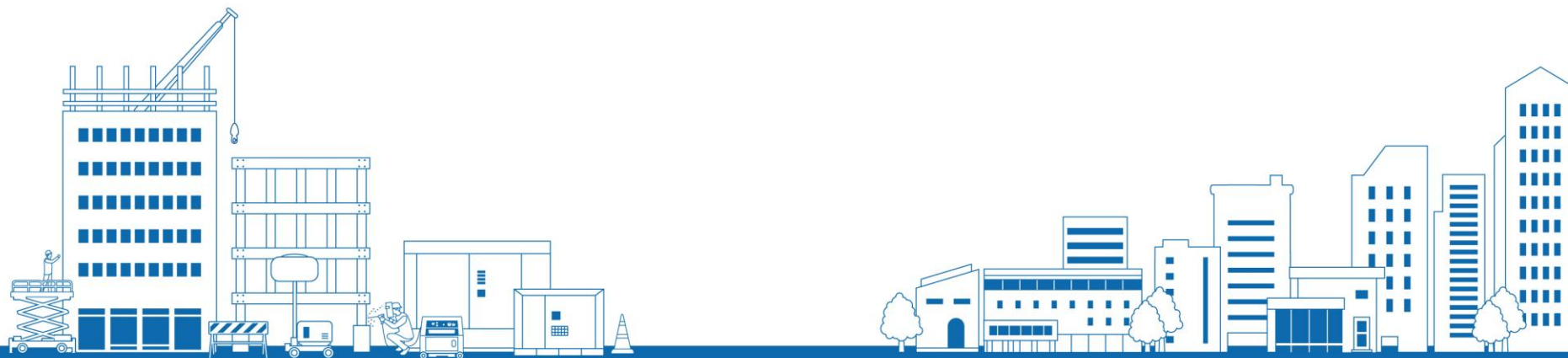


### ◆ Environmental awareness in the material procurement process

Denyo requested that its parts and materials suppliers and contractors consider the environment in their management of chemical substances and in other areas of their businesses. These initiatives, which are summarized in the Denyo Group Green Procurement Guidelines, are being implemented now.

We will continue to promote environmental awareness in the material procurement process.

# Environmental conservation & community contribution activities



## Environmental conservation activities

### ◆ Roof Greening

Based on our environmental policy “promoting environmentally sound business activities,” Denyo has been implementing roof greening activities at the headquarters building since 2012. Roof greening can reduce temperature rise in a building, resulting in mitigation of the heat-island phenomenon and improved cooling efficiency.

Thirty-eight percent (40.88 m<sup>2</sup>) of the headquarters building rooftop area is part of the roof greening efforts, including green planters. The light, artificial soil used withstands the dry summer air well. In addition, approximately 20 varieties, mainly blooming plants, flourish throughout the year so that the four seasons can be sensed, and you can feel refreshed. The area is used by many employees to relax.



### ◆ Water Quality Monitoring



The Fukui plant employs a method that collects treated drain water in an on-premises balancing reservoir before releasing it into a river.

We monitor water quality to ensure that an environment suitable for living creatures is maintained. Even if contaminated water should escape at the primary water discharge, the risk of releasing contaminated water directly into the river is minimized.



## Environmental conservation activities

### ◆ Notice of ‘Deco-Katsu’ Declaration

Denyo endorses the Ministry of the Environment’s ‘National Movement for New and Prosperous Lifestyles toward Decarbonization’ initiative (commonly referred to as “Deco-katsu”), and has declared the following three points to drive initiatives for the realization of carbon neutrality by 2050.

1. We will remain dedicated to the development of products that reduce CO<sub>2</sub> emissions and those that are entirely carbon-free, ensuring that we continue to provide the essential power sources needed by society, no matter the era.
2. In our business activities, we will consistently prioritize energy conservation, waste reduction, and the practice of the 3Rs, contributing to the realization of a resource-circulating society.
3. Each and every one of us will incorporate decarbonization practices into our lifestyles.



### ◆ Hiroshima Sales Office

Installation of solar power generating equipment at new office building and warehouse buildings



The new Hiroshima Sales Office building was completed in September 2023. We installed solar power generating equipment as a carbon neutrality initiative. The equipment provides electricity used by the office and warehouse buildings. We will continue to actively implement capital investments with an eye toward carbon neutrality.

## Community contribution activities

### ◆ Participation in cleaning activities



Denyo has been actively participating in cleaning and other activities organized by an association based in the Konan Industrial Complex where the Shiga Plant is located.

We will continue to participate in cleaning activities like these to make sure that each employee is always aware of the importance of environmental conservation.

### ◆ Participation in accident prevention campaign

In December 2023, there was a winter accident prevention campaign run by the Fujimi Industrial Park Industrial Association in Sakado, Saitama Prefecture, where our Laboratory & Training Center is located. As part of regional contribution efforts, the association conducts the campaign at the end of every year. Our employees participated in the 2023 campaign.

Denyo will strive to contribute to local anti-crime activities by continuing to participate in activities like this every year while simultaneously strengthening relationships with neighboring companies and residents.





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