

Panasonic Group

Sustainability Data Book 2025

Editorial Policy for Our Sustainability Website and Sustainability Data Book 2025

Basic Approach

Our Sustainability website and Sustainability Data Book provide comprehensive, detailed information on our sustainability initiatives. The website provides updated information throughout the year, while information that should be archived annually is compiled and published as a data book in PDF format once a year.

🔗 **Sustainability website** <https://holdings.panasonic/global/corporate/sustainability.html>

Scope of Reporting

Except when noted otherwise, results are calculated based on the following:

- **Period:** Fiscal 2025 (April 1, 2024, to March 31, 2025)
Some information includes past data and data covering the period after April 1, 2025, with the time periods specified.
- **Organization:** Panasonic Group (Panasonic Holdings Corporation and its consolidated subsidiaries). Some consolidated subsidiaries that joined the Group through acquisitions or other means may not be included.
Note that for Panasonic Automotive Systems (PAS), the information includes performance up to November 30, 2024, unless otherwise noted.
In this data book, “the Company” refers to Panasonic Holdings Corporation, and “we,” “Panasonic,” and “the Group” refer to the Panasonic Group mentioned above.
- **Data:**
 - Data concerning manufacturing sites cover all the manufacturing sites (totaling 218) that constitute the Panasonic Group’s environmental management system
 - Energy data and CO₂ emissions data from energy sources are added for non-manufacturing sites (74)
 - Data for which the fiscal year and region are not expressly stated are global results for fiscal 2025

Assurances

LRQA Limited has assured the primary environment-related data. For details on the indicators covered by the assurance, please refer to the Independent Assurance Statement on [p. 154](#).

Assured indicators are marked with ★.

Reference Guidelines

- Reporting requirements of the GRI Standards
- Japanese Ministry of the Environment, “Environmental Reporting Guidelines 2018”

Publication Date and Update Schedule

Sustainability Website

- Updated annually every August (last updated in August 2025). Subject to further updates as necessary.

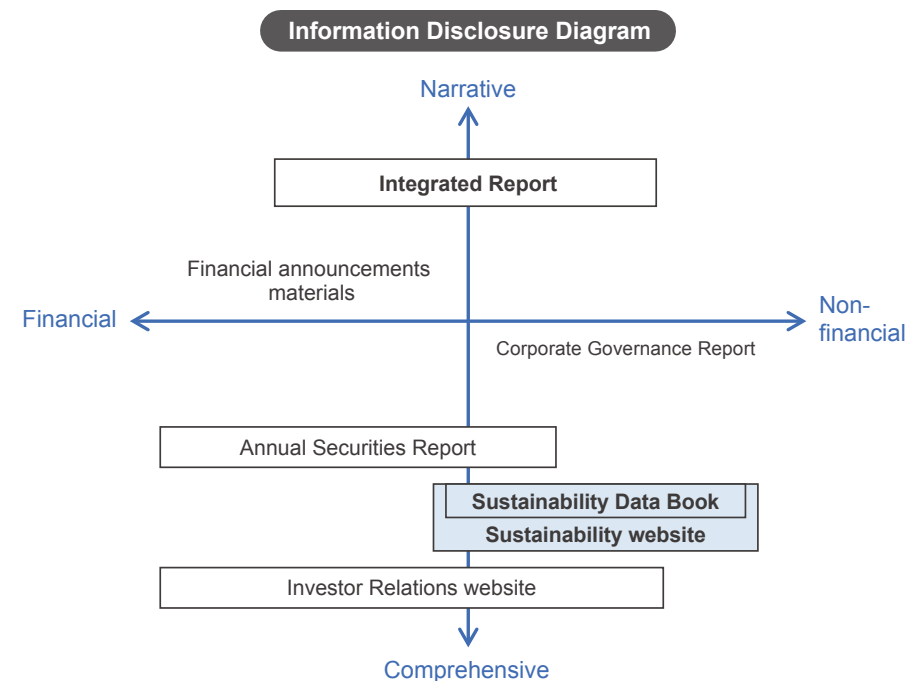
Sustainability Data Book 2025

- Published in August 2025. It reflects the content on the Sustainability website as of the August 2025 update.

Sustainability Website and Data Book Positioning

We edit and publish our corporate reports according to the approach outlined in the diagram below. We pursue a cohesive narrative combining sustainability-related and financial information in our integrated report, and we comprehensively supplement it with the Sustainability website and Data Book.

🔗 **Integrated Report** <https://holdings.panasonic/global/corporate/investors/library/annual-report.html>



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Group CEO Message

Achieving a Better, Sustainable Society

In 1932, the Panasonic Group's founder, Konosuke Matsushita, set forth a visionary "250-year plan." This plan, divided into ten phases of 25 years each, is grounded in his aspiration to create "an ideal society with affluence both in matter and mind." Since then, we have dedicated ourselves to fulfilling this mission by addressing various social issues through our business activities, thus contributing to both customers and society.

As we continue down this path, it is becoming increasingly important to achieve well-being in society and people's lives in a sustainable manner. In this regard, we can observe numerous imbalances in the world today: economic disparity and the consequent concerns over human rights, social isolation stemming from lifestyle changes and technological advances, and issues involving ethics and privacy. By actively taking on and resolving these challenges, we aim to foster a more harmonious society where every individual can experience a greater sense of well-being.



Yuki Kusumi
Group CEO

Achieving this state of sustainable well-being will require finding solutions to global environmental issues. Global warming and the depletion of natural resources are becoming more severe each year, and they must be tackled as an immediate and shared responsibility across all of society.

Through each of our businesses, the Panasonic Group is firmly resolved to address these issues. By continuing to deliver meaningful contributions to both our customers and society, we aim to support sustainability for the next generations. In turn, these efforts will enhance our corporate value and enable us to make even greater contributions to the world. This is how we will promote sustainability management and fulfill our lofty mission.

Ongoing management reform across the entire Panasonic Group is driven by our strong determination to further strengthen these contributions as we move forward. Through reinforcing our profitability structure and business portfolio management, we are accelerating our transformation toward a sustainable business model, while also pursuing our goal of maximizing value creation. At the same time, we are building a new organizational culture that seeks to "unlock" the potential of our diverse human resources, thus enabling individual employees to fully exert their strengths. We are also fully utilizing the power of rapidly evolving AI to refine our products and solutions, as well as to promote operation and process innovations. These initiatives are key to enhancing our competitiveness and productivity.

However, our efforts alone cannot ensure that these initiatives succeed. This can only be achieved through communication, collaboration, and co-creation with our stakeholders: customers, business partners, shareholders, employees, and communities. As a public entity of society, the Panasonic Group will continue to make progress together with all of its stakeholders to help create a better and sustainable society.

Sustainability Management Basic Philosophy & Structure

Basic Philosophy

The Panasonic Group's mission is to achieve "an ideal society with affluence both in matter and mind." This is grounded in the dream of achieving prosperity both in matter and mind, which is the ideal state of society that our founder Konosuke Matsushita envisioned and pursued. In 1932, the founder set forth a 250-year plan, consisting of ten successive phases of 25 years, to reach the ideal society he envisioned.

For our Group, "sustainability management" is the pursuit of this mission.

We will strive to address social issues through our business activities and contribute to a more prosperous and sustainable society thereby enhancing our corporate value. Through these consistent efforts, we aim to achieve our goal to realize "an ideal society with affluence both in matter and mind."

To achieve this, we will always squarely address the social issues of the time and continue to create new value through our business activities. At the same time, we will also focus on building and strengthening a sustainable management foundation that will enable sustainable value creation.

As a public entity of society, the Panasonic Group will share this mission and philosophy with all of its stakeholders, and together we will pursue the ideal society we envision.



Structure for Promoting Sustainability Management

The Group has established the Sustainability Management Committee under the supervision of the Board of Directors for the purpose of discussing, directing, and managing policies, strategies, indicators, and targets regarding essential themes related to sustainability. The Committee meets once a month, in principle.

The Sustainability Management Committee is chaired by the Group CEO and comprises the Group CHRO, the Group CTO, the Group GC, the Group CSO, the Group CFO, and Group company directors and executive officers.

Matters deliberated and decided by the Sustainability Management Committee are reported to the Board of Directors depending on their content. Moreover, any matters that need to be addressed by operating companies are shared and disseminated throughout the entire Group via the Group Management Meeting and other avenues. Meanwhile, to ensure the effectiveness of the Board

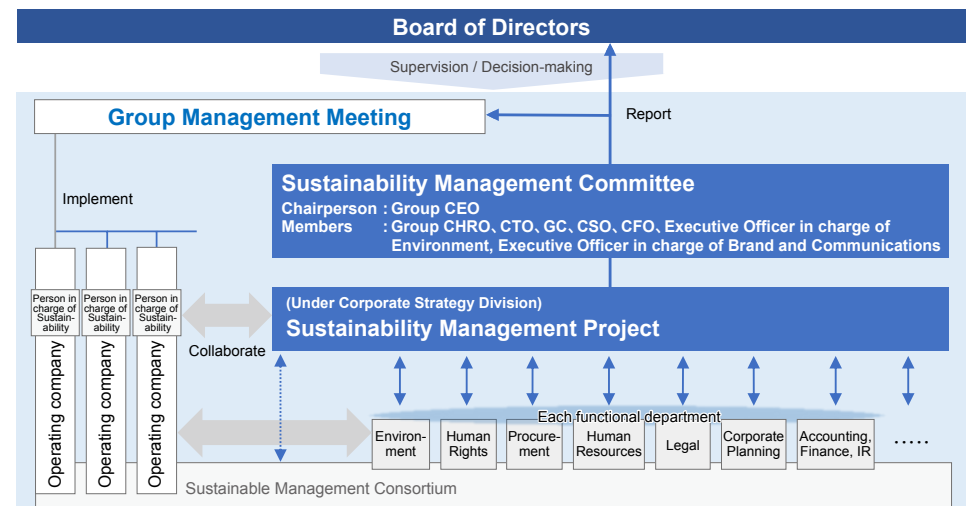
of Directors' oversight of sustainability-related matters, we have established "sustainability management" as one of the skills and knowledge that the Board of Directors should possess and have set non-financial indicators for the performance-based portion of compensation for directors.

In FY2025, to strengthen the formulation and promotion of policies, strategies, and measures related to the Group's sustainability management, we established a new cross-functional Sustainability Management Project within Panasonic Holdings Corporation, built a sustainability promotion structure for each operating company, and strengthened the collaboration system throughout the Group. There is also the Sustainable Management Consortium, which is a voluntary-participation, flat platform for information exchange where employees from across the Group come together and discuss various sustainability topics. Most are members of teams engaged in addressing environmental-related issues. The Sustainability Management Project team also participates and cooperates in the running of this consortium.

The main items discussed by the Sustainability Management Committee in FY2025 are as follows:

- Setting of indicators and targets related to materiality
- Consideration of operating companies' mid-term targets related to sustainability
- Compliance with sustainability-related laws and regulations in Europe (CSRD, CSDDD and Battery Regulation)
- Review of value creation process and materiality.

Structure for Promoting Sustainability Management (As of June 2025)

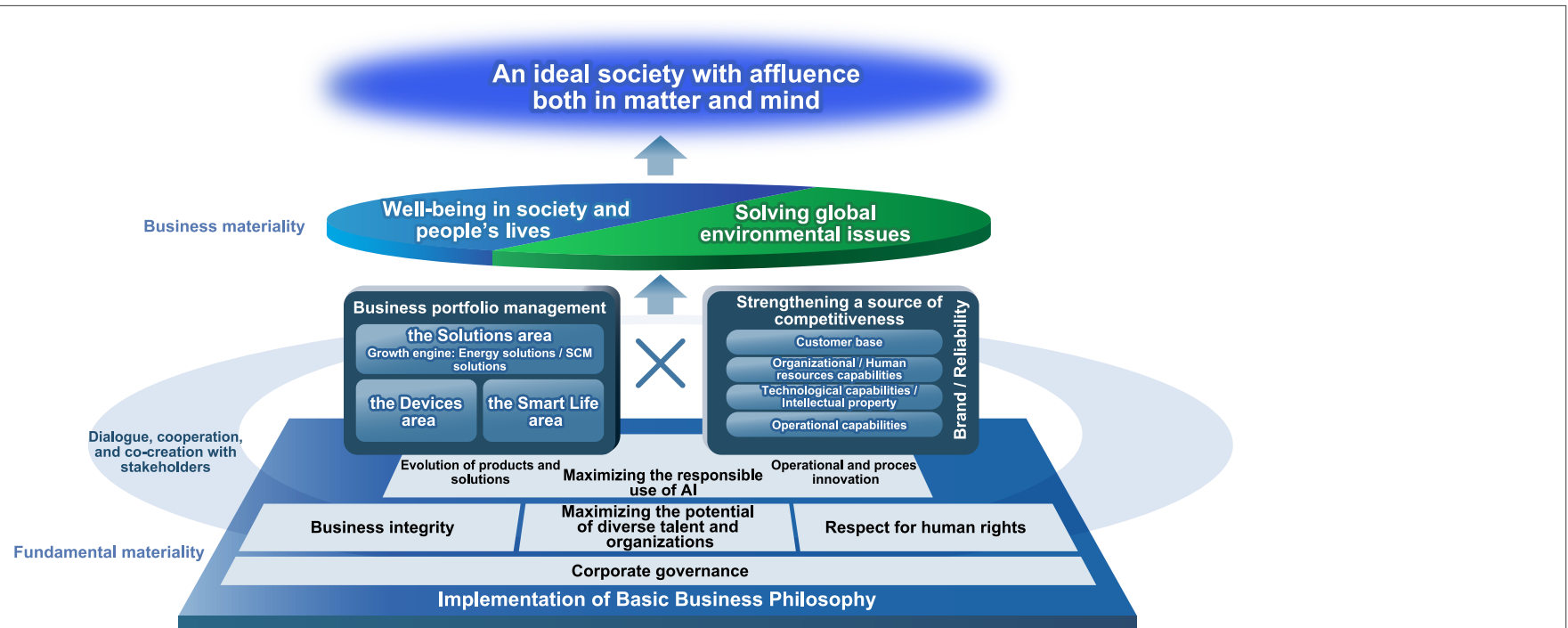


• Group Management Meeting: Chaired by Group CEO, consisting of about 20 Executive members including the presidents of operating companies, heads of each function (held monthly in principle)

Value Creation Process and Materiality

Value Creation Process

The Value Creation Process details the kinds of value that we are generating in order to sustainably contribute to society and enhance our corporate value, and describes how this is being achieved. In essence, the process is as shown in the conceptual diagram below:



Toward its mission of achieving “an ideal society with affluence both in matter and mind,” the Panasonic Group will continue to create value through its business activities in the form of “contributing to solving global environmental issues” and “well-being in society and people’s lives” (= business materiality). To achieve this, we will optimize our business portfolio and strengthen our focus areas while also working to continually strengthen intangible properties, which are a source of competitiveness common to the Group. By combining these initiatives, we will maximize value creation.

At the same time, we will also focus on building and strengthening a management foundation that will enable sustainable value creation (= fundamental materiality). In addition to initiatives such as “corporate governance,” “business integrity,” “respect for human rights,” and “maximizing the potential of diverse talent and organizations,” we will enhance our business through the evolution of products and solutions and strengthen our source of competitiveness through operational and process innovation by “maximizing the responsible use of AI.”

The basis for all of these initiatives is our Basic Business Philosophy. As a public entity of society, we will engage in dialogue, cooperation, and co-creation with all relevant stakeholders, aiming to achieve the ideal society we envision together.

Materiality

Materiality (from FY2026)

At Panasonic we regard materiality as “priority issues for creating value for society”, and, to support this value creation, we have opted for business materiality, which involves the creation of value through business activities, and fundamental materiality, which involves the building and strengthening of a management foundation. These are important elements in the aforementioned value creation process.

We set and continually try to improve KPIs for each materiality, with a view to creating even greater value. Specific details are shown in the following table.

	Materiality	Activities (Examples)	Indicators	Targets	Report on related items		
Business materiality	Contributing to solving global environmental issues	Contributing to decarbonization	<ul style="list-style-type: none"> Reducing our own CO₂ emissions Improving the eco-efficiency of products and solutions Increasing avoided CO₂ emissions Standardizing avoided CO₂ emissions 	CO ₂ reduction impact	300 million tons (by 2050) Emissions reduction in our own value chain (FY2026) - 40.12 million tons (17.01 million tons) ¹ Avoided emissions (FY2026) 47.50 million tons	“Mid-term to Long-term Environmental Vision” Sustainability Data Book 2025 p. 15 ☞ Sustainability website	
				CO ₂ emissions from all factories	Net zero (by 2030)	“Climate Change” Sustainability Data Book 2025 p. 51 ☞ Sustainability website	
	Promoting a circular economy (CE) ²	<ul style="list-style-type: none"> Creating CE business models Wider use of recycled materials Resource-saving products and longer product life 	Amount of recycled materials used	Amount of recycled resins used 25,000 tons (FY2026)	“Resources” Sustainability Data Book 2025 p. 56 ☞ Sustainability website		
			Number of circular economy business models	A total of 16 businesses (FY2026)			
Well-being in society and people's lives	Well-being in society Well-being in people's lives	• To be determined in line with the next medium-term strategy			—		
Fundamental materiality	Maximizing the responsible use of AI	Evolving products and solutions through the use of AI Promoting operational and process innovation through the use of AI	• To be determined in line with the next medium-term strategy			“AI Ethics” Sustainability Data Book 2025 p. 121 ☞ Sustainability website	
				Organization culture transformation	<ul style="list-style-type: none"> Promoting individual behavioral change by disseminating the Basic Business Philosophy Encouraging all organizational heads to transform the organization culture to the one we want 	“UNLOCK” indicator ³	FY2028: 60% FY2031: 70%
	Maximizing the potential of diverse talent and organizations	Develop & appoint diverse, transformational leaders Safe, secure and healthy work environment	<ul style="list-style-type: none"> Developing personnel requirements and succession plans for all key positions, and training successors Acquiring and systematically developing female leaders in the Japan region Ensuring compliance with the Code of Ethics & Compliance and the Occupational Health and Safety Policy Promoting activities to prevent serious accidents and advancing health management 	Diversity ratio of the management team (Diversity of PHD Executive Officers (Total ratios of female, non-Japanese citizens and mid-career hires))	More than half	“Maximizing the Potential of Diverse Talent and Organizations” Sustainability Data Book 2025 p. 95 ☞ Sustainability website	
				Ratio of female managers (PHD, PEX and the six operating companies)	12% (April 1, 2028) 16% (April 1, 2031)		
				The number of serious or major accidents	Zero		
	Respect for human rights		<ul style="list-style-type: none"> Improving human rights due diligence (such as training on forced labour prevention, promoting engagement with affected stakeholders, strengthening DD in VC in corporation with business partners) Establishing a system and human resource development to support human rights DD initiatives Promoting engagement with relevant organizations to contribute to and participate in rule-making 	Productivity indicator (EBITDA divided by personnel expenses)	Target (improvement rate) to be determined in line with the next medium-term strategy		
				Implementation rate of in-person training on forced labour prevention provided to Group sites in Japan and overseas that employ foreign migrant workers	100% (FY2027)	“Respect for Human Rights” Sustainability Data Book 2025 p. 89 ☞ Sustainability website	
Level of understanding of participants in “Human Rights Due Diligence Promotion Training” to develop the promotion leaders at each operating company ⁴				80%			
Business integrity				<ul style="list-style-type: none"> Strengthening mechanisms to ensure compliance (such as by establishing a Code of Ethics & Compliance and internal rules, by providing education, and by promoting communication) Strengthening mechanisms for early detection of possible concerns (such as by improving awareness of the whistleblowing system “EARS”) 	Occurrence of serious compliance violations	Zero	“Compliance” Sustainability Data Book 2025 p. 145 ☞ Sustainability website
Corporate governance		<ul style="list-style-type: none"> Board design that realizes optimal management decisions (such as by defining required skill sets and assigning diverse members, and by designing an executive compensation system) Constructive engagement with shareholders and investors 	Enhancing constructive dialogue with shareholders	Implemented	Corporate information website ☞ “Corporate Governance”		
			Ratio of outside directors in the PHD Board of Directors	More than half			
			Chairperson of the Board of Directors to be Outside Director who are Independent Director	Implemented			
			Adoption of non-financial indicators in performance-based compensation for directors	Implemented			

¹ The figures in parentheses indicate the amount of CO₂ reduction compared to fiscal 2021 for the businesses subject to measurement in fiscal 2025.

² The factory waste recycling rate, based on the definition we have used, has maintained a high level of more than 99% since the past. As we are reviewing the definition of this indicator to ensure its alignment with global trend of rules, this indicator is not listed in the table above.

³ Favorable response rate for both questions in the Employee Opinion Survey, “Motivation from the company or supervisors” and “No significant barriers at work” (Target: Group employees globally)

⁴ The post-training questionnaire focuses on assessing the level of empathy towards “business and human rights” and the level of awareness regarding its promotion, in addition to the level of understanding of the content.

Materiality Identification Process

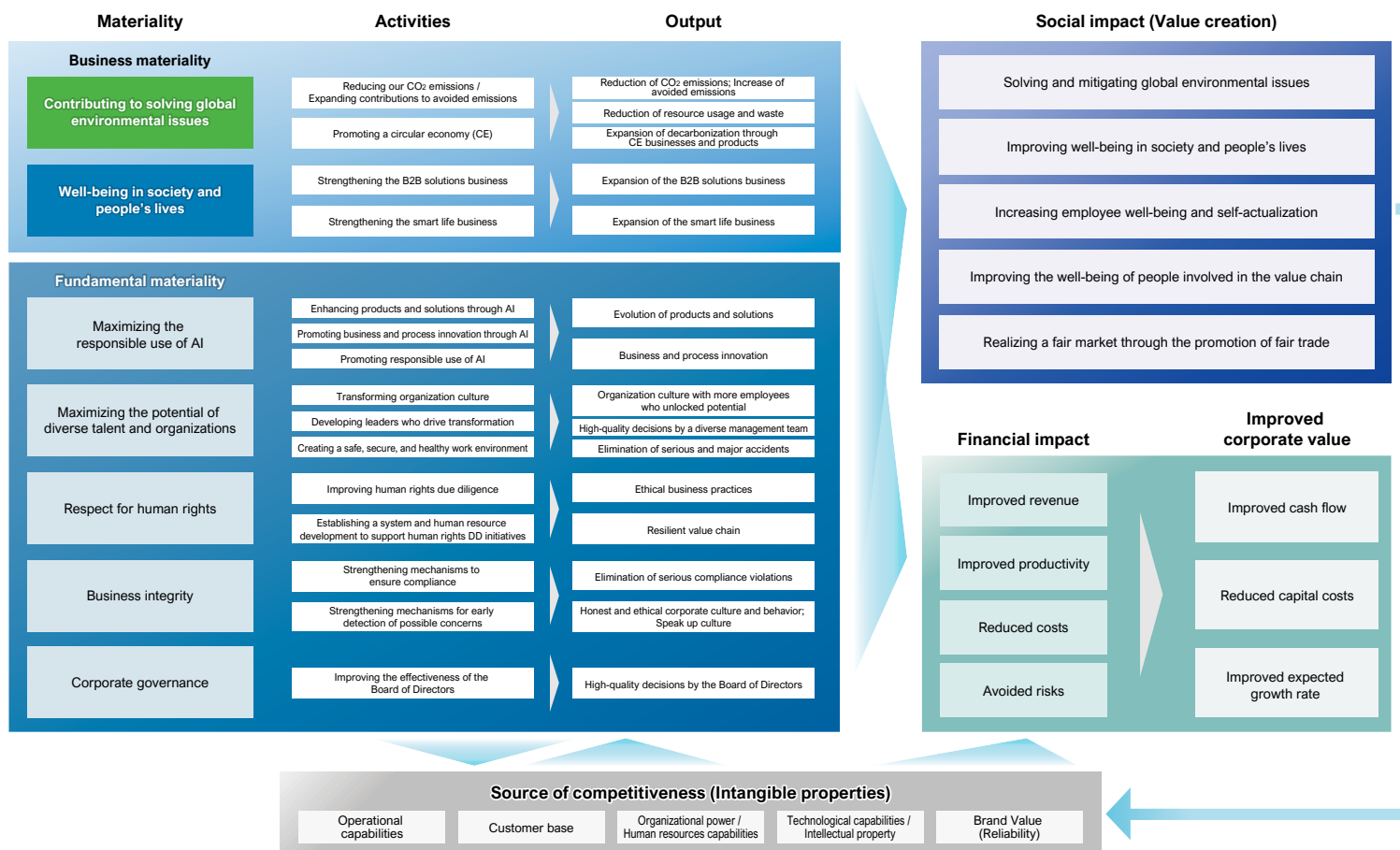
In FY2024, the Group identified important opportunities and risks as materialities from the two perspectives of financial effects on the Group and impact on society. The identification process is as follows:

1. List issues that could represent opportunities and risks based on demands from society and foreseeable future challenges
2. Assess the importance of these issues from the perspective of the Group and its stakeholders and extract materialities
3. Confirm the validity of this process and the extracted materialities through dialogue with multiple external experts
4. Identify materialities after deliberation at the meetings of the Group's Sustainability Management Committee and the Group Management Meeting and with the Board of Directors.

Furthermore, starting from FY2026, we have narrowed down our materialities to "priority issues for creating value for society" and are reviewing them to ensure they are consistent with our future business direction and strategies.

Relationship of Materiality to Value Creation

When redefining materiality as a key issue for value creation, we examined how the activities related with each materiality are linked to social impact and increased corporate value, and organized those relationships accordingly.



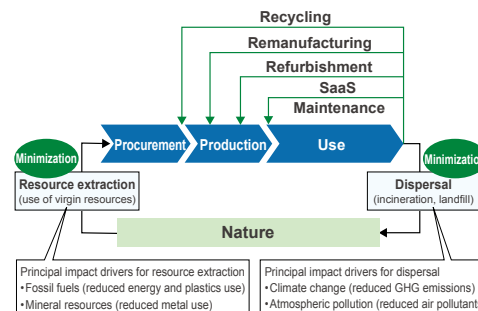
Attempt at Visualizing Social Impact – CE Businesses

The Panasonic Group is aiming to strengthen dialogue with stakeholders by translating the social impact of its businesses into monetary value, and to thereby gain an objective view of the significance and outcomes of our initiatives. In a new effort this year, we are attempting to value the environmental impact of our circular-economy (CE) businesses (in which the causal relationships are highly complex) in monetary terms. This section outlines our approach and the progress that we have achieved in this pioneering impact-accounting exercise.

The environmental contribution made by our CE businesses extends beyond simple physical indicators like product recycling ratios and CO₂ reductions and can be perceived as the “environmental value” provided to society. We believe it is important to carry out an integrated and objective assessment of this value and communicate the result to our stakeholders in an easy-to-understand way. With this in mind, the Panasonic Group has started using the common yardstick of currency to visualize the social benefits created when environmental burdens are eased and resources are recycled. In concrete terms, CE businesses help ease these burdens by minimizing both the extraction of natural resources for economic activity and the dispersal of waste, such that nature can still cope. These activities form the core of our definition of “environmental value” and impact accounting plays a key role in fulfilling our corporate social responsibility.

The environmental impact of our CE businesses is defined as the difference they can deliver compared to conventional linear models. This difference includes both positive impacts, such as reduced waste, and negative impacts, such as the energy consumed for recycling. Impact accounting is applied using a monetization factor for each impact driver based on indicators and methodologies such as the International Foundation for Valuing Impacts (IFVI) and Life Cycle Impact Assessment (LCIA).

Framework using “extraction” and “dispersal”**



** This framework was created with reference to the following:
WBCSD, Circular Transition Indicators v4.0: Metrics for business, by business, 2023
Yuki Isogai, Hitsuizen-to-shiteno circular business, Nikkei BP, 2024

Principal environmental impacts

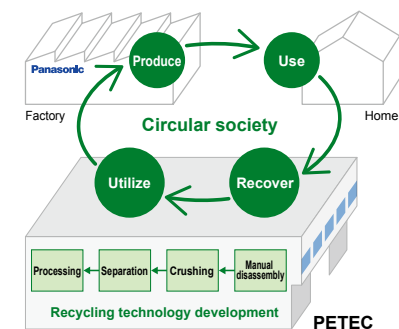
Impact driver	Description of the impact	Principal impact(s)
Mineral resources	Impact on the loss of future supply due to the present removal of the resource (impact on the extinction of the resource stocks/expense and profits from future exploitation)	Reduced mineral use due to material recycling
Land use	Impact on the ecosystem services lost when land is converted and occupied for mineral mining	Area of land altered by mineral mining /area of land prevented from alteration
Fossil fuels (for energy)	Impact on the loss of future supply due to the present removal of the resource (impact on the extinction of the resource stocks/expense and profits from future exploitation)	Energy used for the company and VC business activities
Fossil fuels (for plastics)	Impact on the loss of future supply due to the present removal of the resource (impact on the extinction of the resource stocks/expense and profits from future exploitation)	Reduced plastic use for the company and VC business activities
Water consumption	Impact on human health (water-related infections and malnutrition) due to water consumption, impact on human lifestyle (loss of cultural assets, communities, etc.) due to droughts caused by water shortages, impact on access to water.	Water consumed for business activities
Climate change	Impact on socio-economic aspects by the effects of CO ₂ emission on human health (increased mortality), biodiversity (reduced area for plant cultivation, increased extinction risk), labor productivity, income from energy consumption and production, etc.	CO ₂ emitted by the company and VC businessd activities
Air pollution (SOx, NOx, PM2.5)	Impact of other atmospheric emissions (SOx, NOx, PM2.5) on human health (mortality and disease rates, chronic bronchitis, restricted activity), visibility (especially for shipping, aviation, recreation, etc.), and on agriculture	Pollutants emitted to the atmosphere by the company and VC business activities
Waste	Impact on socio-economic aspects by the effects of CO ₂ emission on human health (increased mortality rates), biodiversity (reduced area for plant cultivation, increased extinction risk), labor productivity, income from energy consumption and production, etc.	Reduced CO ₂ emitted during product disposal

In 2024, we quantified in monetary value the environmental impact of some CE businesses in the Panasonic Group. Here we highlight the results for our consumer electronics recycling and refurbishing businesses.

Consumer electronics recycling business (Panasonic Eco Technology Center: PETEC)

PETEC collects the four appliance types covered by the 2001 Home Appliance Recycling Law—TVs, air conditioners, refrigerators/freezers, and washing machines—from designated pick-up points, dismantles them, and recycles the materials. Useful materials such as iron, copper, and aluminum are recovered from the used appliances, helping to promote the efficient use of resources. Although material recycling plays a particularly significant role in alleviating climate change and promoting the sustainable use of resources, it also has some downsides, such as the generation of CO₂ emissions during transportation. All the corresponding impacts are evaluated to calculate the environmental value in numerical terms.

Process of creating a circular society through consumer electronics recycling



Consumer electronics refurbishing business (Panasonic Factory Refresh)

Panasonic Factory Refresh refurbishes consumer electronics slated for disposal and returns them to the market as refurbished products. Focusing on TVs and dishwashers in 2024, the company analyzed the effect on the environment of restoring initially faulty appliances and extending the service life of subscription products. Although the positive impacts (such as reduced waste, and the avoidance of high CO₂ emissions from manufacturing and disposal) were partially offset by the additional energy usage, water consumption, and CO₂ emissions resulting from the restoration process, the numerical data showed an overall positive effect.

The positive environmental impact delivered by the two businesses in 2024 was assessed as 1.71 billion yen and is expected to reach 1.75 billion yen in 2025. This type of quantitative assessment highlights the areas on which each CE business should focus. It could also be used in future as an analysis tool to assist business decision-making.

Environmental impact delivered by the consumer electronics recycling and refurbishing businesses

Unit: million yen

	Mineral resources	Land use	Fossil fuels (energy)	Fossil fuels (reduced plastic use)	Water consumption	Climate change	Air pollution	Waste	Total
2024	472	17	358	32	-3	799	24	11	1,709
2025 (forecast)	479	17	370	44	-4	811	24	11	1,753

FY2025 Materiality Results

	Materiality	Indicators	Targets	Results	Report on related items
Group common strategy	Global warming and resource depletion	CO2 reduction impact	300 million tons (by 2050)	Emissions reduction in our own value chain -38.11 million tons (19.01 million tons) ^{*1}	“Mid-term to Long-term Environmental Vision” Sustainability Data Book 2025 p. 15 “Climate Change” Sustainability Data Book 2025 p. 51
		CO ₂ emissions from all factories	Net zero (by 2030)	A total of 45 factories	
		Factory waste recycling rate	99% or more	99.2%	“Resources” Sustainability Data Book 2025 p. 56
	Each customer's life-long health, safety and comfort	Not set		—	—
Foundation for sustainable value creation	Business integrity	Occurrence of serious compliance violations	Zero	Zero ^{*2}	Sustainability Data Book 2025 “Compliance” p. 145
	Supply chain management	Not set		—	—
	Employee well-being	Occurrence of serious or grave accidents	Zero	7 serious accidents Zero major accidents	Sustainability Data Book 2025 “Maximizing the Potential of Diverse Talent and Organizations” p. 95
		(1) Employee engagement / (2) Employee enablement in the Employee Opinion Survey	The highest global standard (80% FY2031)	(1) 68% (2) 66%	
	Corporate governance	Enhancement of constructive dialogue with shareholders	Implemented	Implemented	Corporate information website ☞ “Corporate Governance”
		Evaluation of the effectiveness of the Board of Directors and implementation of improvement measures	Implemented	Implemented	
		Ratio of outside directors in the PHD Board of Directors	1/3 or more	46.1%	
		Adoption of non-financial indicators in performance-based compensation for directors	Implemented	Implemented	
	Respect for human rights	Promotion of correction of issues identified in human rights due diligence for each Group company which may cause forced labor	Implemented	Implemented	Sustainability Data Book 2025 “Respect for Human Rights” p. 89
		Implementation rate of in-person training on forced labour prevention provided to Group sites in Japan and overseas that employ foreign migrant workers	100%(FY2027)	40.6%	
Cyber security	Provision of education and training for all employees to improve security awareness and promote behavioral change	More than four times a year	5 times	Sustainability Data Book 2025 “Cyber Security and Data Protection” p. 151	
	Collection and monitoring of threat and vulnerability information by an expert team, and implementation of necessary measures	Implemented	Implemented		
	Incident response training by an expert team in anticipation of cyber attacks	More than once a year	2 times		
	Number of serious incidents	Zero	Zero		

*1 The figures in parentheses indicate the amount of CO2 reduction compared to fiscal 2021 for the businesses subject to measurement in fiscal 2025.

*2 It has been discovered that Panasonic Industries Co., Ltd. (“PID”), a subsidiary of the Company, engaged in multiple irregularities during the previous fiscal year in the process of the certification by UL Solutions (“UL”), a third-party safety science organization in the U.S., for electronic materials manufactured and sold by PID. In response to this, PID established an external investigation committee composed of external experts and conducted investigations into the irregularities in the process of the certification by UL and other quality irregularities. During this fiscal year, PID published the investigation report it received from the external investigation committee and the measures it formulated to prevent recurrence.

*3 Of the materialities before the review, “supply chain management” will be addressed under the items “contributing to solving global environmental issues” and “respect for human rights.” Meanwhile, “cyber security” is a major element of our company's risk management and will be addressed as an important risk item in our ERM activities. Accordingly, these items have been excluded from the current materiality (from FY2026).

Stakeholder Engagement

Stakeholder Engagement

The Panasonic Group engages in dialogue with its diverse range of stakeholders worldwide on various aspects of its business. The Group incorporates the opinions it receives into its business activities and product creation.



Examples of Stakeholder Engagement

	Objectives	Means/Methods (Figures in brackets are for fiscal 2025)	Report on related items
Customers	To incorporate customer feedback into our management and provide accurate and honest information and communication.	Business activities; Website; Customer care center (1,330,000 cases)/Call center; Voice of Customer (VOC) activities; Publicity and advertising.	Sustainability Data Book 2025 "Customer Relations" p. 123
Shareholders/ Investors	To fulfill our accountability, improve the quality of management, and increase corporate value, through constructive dialogue and feedback to management.	General meeting of shareholders (once); Financial results announcements (4 times); Strategy briefing (15 times*); Group/individual meetings (totaling approximately 1,600 companies). * Includes 10 information sessions organized in collaboration with securities companies	Investor Relations
Suppliers	To promote procurement activities based on mutual trust that comply with laws, international and social norms, and corporate ethics, and that fulfill our social responsibilities in areas such as human rights and labor, health and safety, global environmental conservation, and information security.	Procurement activities: Suppliers' meeting; CSR self-assessment (More than 12,300 companies); Supplier audit (Cumulative total of 271 companies).	Sustainability Data Book 2025 "Responsible Supply Chain" p. 111
Employees	To enable each employee to unlock their potential, take on challenges that exceed the expectations of those around them, and maximize their abilities.	Employee Opinion Survey (once); Messages from top management (announcement of management policies, etc.); Dialogues/networking event; Intranet & in-house SNS; Training (regarding management philosophy, etc.); Group CEO Award.	Sustainability Data Book 2025 "Maximizing the Potential of Diverse Talent and Organizations" p. 95
Government/ Industry Organizations	To comply with domestic and international laws and regulations and solve common issues across the industry.	Participation in business and industrial organizations; Contribution to policy development by international organizations and governments; Participation in initiatives.	Sustainability website "Environment" > Environmental Communication Sustainability Data Book 2025 "Environment" > Activities to raise awareness of and valorize Avoided CO ₂ Emissions p. 27 "Respect for Human Rights" > Participation in International and Industrial Partnerships p. 94 "Compliance" > Ensuring Transparency of Political Contribution Funds p. 150

Respecting Applicable Legislation, Global Standards, Norms, Guidelines, and Initiatives

The Panasonic Group conducts its business in accordance with applicable legislation, as well as global standards, specifications, norms, guidelines, and various initiatives.

These concepts are reflected in the Basic Business Philosophy and the Panasonic Group Code of Ethics & Compliance that form the guidelines for the company's business activities.

Global Standards, Norms, Guidelines and Initiatives

OECD Guidelines for Multinational Enterprises on Responsible Business Conduct	ISO26000	UN Global Compact
Code of Conduct of RBA (Responsible Business Alliance)	Japan Business Federation Charter of Corporate Behavior	Global Reporting Initiative (GRI) Standards
TCFD (Task Force on Climate-related Financial Disclosures)	RE100	Race To Zero
Universal Declaration of Human Rights	ILO Core Labour Standards	UN Guiding Principles on Business and Human Rights

External Recognition

Evaluation and certification by major certifying organizations are as follows. Indices marked with an asterisk (*) were adopted by the Government Pension Investment Fund (GPIF) to promote ESG investment.

FTSE

Panasonic Holdings Corporation is a constituent of the FTSE4Good Index Series, the FTSE Blossom Japan Index* and the FTSE Blossom Japan Sector Relative Index*.

🔗 **FTSE4Good** <https://www.lseg.com/en/ftse-russell/indices/ftse4good>

🔗 **FTSE Blossom Japan Index Series** <https://www.lseg.com/en/ftse-russell/indices/blossom-japan>



FTSE4Good

FTSE Russell (the trading name of FTSE International Limited and Frank Russell Company) confirms that Panasonic Holdings Corporation has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to become a constituent of the FTSE4Good Index Series. Created by the global index provider FTSE Russell, the FTSE4Good Index Series is designed to measure the performance of companies demonstrating strong Environmental, Social and Governance (ESG) practices. The FTSE4Good indices are used by a wide variety of market participants to create and assess responsible investment funds and other products.



FTSE Blossom Japan Index

FTSE Russell confirms that Panasonic Holdings Corporation has been independently assessed according to the index criteria, and has satisfied the requirements to become a constituent of the FTSE Blossom Japan Index. Created by the global index and data provider FTSE Russell, the FTSE Blossom Japan Index is designed to measure the performance of companies demonstrating strong Environmental, Social and Governance (ESG) practices. The FTSE Blossom Japan Index is used by a wide variety of market participants to create and assess responsible investment funds and other products.



FTSE Blossom Japan Sector Relative Index

FTSE Russell confirms that Panasonic Holdings Corporation has been independently assessed according to the index criteria, and has satisfied the requirements to become a constituent of the FTSE Blossom Japan Sector Relative Index. The FTSE Blossom Japan Sector Relative Index is used by a wide variety of market participants to create and assess responsible investment funds and other products.

MSCI

In 2024, Panasonic Holdings Corporation received a rating of AA (on a scale of AAA-CCC) in the MSCI ESG Ratings assessment. The company is a constituent of the MSCI Selection Indexes, the MSCI Japan ESG Select Leaders Index and the MSCI NIKONKABU ESG Select Leaders Index*.

🔗 **MSCI website** <https://www.msci.com/esg-integration>

MSCI ESG RATINGS



CCC B BB BBB A **AA** AAA

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2025 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX

2025 CONSTITUENT MSCI NIKONKABU ESG SELECT LEADERS INDEX

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S&P/JPX Carbon Efficient Index*

Panasonic Holdings Corporation has been a constituent of S&P/JPX Carbon Efficient Index, one of the environmental stock indices of the world's largest pension fund, the Government Pension Group Investment Fund (GPIF) since 2018.

CDP 2024

"CDP Climate Change Report 2024 (Japan)" was published in March 2025. It covers the results of the survey by the U.K.-based non-profit organization CDP (formerly the Carbon Disclosure Project), which evaluates companies around the world in regard to measures against climate change and specific greenhouse gas emissions.



Panasonic Holdings Corporation received an "A," the highest of eight ratings, for three consecutive years in recognition of its efforts for climate change—such as reducing CO₂ emissions and setting medium- to long-term targets— and its information disclosure. Additionally, we received an "A" in the Supplier Engagement Assessment for five consecutive years in recognition of our supplier activities regarding climate change.

EcoVadis

EcoVadis provides a global platform for supplier sustainability assessment and is used in over 180 countries. EcoVadis evaluates sustainability based on 21 indicators in four areas: Environment, Labor and Human Rights, Ethics, and Sustainable Procurement. Panasonic Holdings Corporation receives a rating from EcoVadis every year. In the scorecard issued in December 2024, the overall score was 70 out of 100 and the percentile ranking was 90th (top 10%).

Fiscal 2025 External Awards in the Environmental Field

The Panasonic Group received various awards as results of environmental activities implemented by whole Panasonic group in Fiscal 2025, following the previous year.

Major External Awards in Environmental Fields (Fiscal 2025)

Category	Presenters and awards	Award titles	Recipient companies and details	URL
Products & services	Japan: The Energy Conservation Center, Japan (ECCJ) Energy Conservation Grand Prize 2024	Agency for Natural Resources and Energy Commissioner's Award /Product & Business Model Category (Home Appliance category)	Panasonic Corporation Heating and Ventilation A/C Company Development of clothes drying dehumidifier F-YEX120B with the new eco hybrid system	https://news.panasonic.com/jp/topics/206103
		ECCJ Chairman's Award/Product & Business Model Category	Panasonic Corporation Cold Chain Solutions Company, Panasonic Housing Solutions Co., Ltd. Freezing Reach-in Showcase using vacuum insulated glass (RE series)	
	Japan: Japan Electrical Manufacturers' Association (JEMA) The 73rd (2024) Electrical Industry Technical Achievement Awards	Home Electrical Appliances category Excellence Award	Panasonic Corporation Living Appliances and Solutions Company Creation of Electric Shaver: Lamdash Palm-in	https://holdings.panasonic.jp/corporate/technology/awards/winner_2024.pdf
		Home Electrical Appliances category Superior Award	Panasonic Corporation Living Appliances and Solutions Company Table-top dishwasher/dryer for single households, with the industry's smallest A4 footprint	
		Home Electrical Appliances category Superior Award	Panasonic Corporation Living Appliances and Solutions Company Development of AI Cooling system that optimizes defrosting in refrigerators with a combination of cloud connectivity and AI	
		Home Electrical Appliances category Encouragement Award	Panasonic Corporation Living Appliances and Solutions Company Development of the industry's first stick-type vacuum cleaner with a body of composite resin that includes biomass and recycled materials	
Japan: Japan Institute of Design Promotion 2024 Good Design Award	Good Design Best 100, etc.	Panasonic Corporation Refrigerators and freezers NR-C37ES1,C33ES1 series nanocare Dryer EH-NC80 EH-NC50	https://news.panasonic.com/jp/topics/205959	
Japan: Ichimura Foundation for New Technology 57th Ichimura Prize Ichimura Prize in Industry against Global Warming	The Ichimura Prize in Industry against Global Warming for Excellent Achievement	Panasonic Holdings Corporation Manufacturing technology for high density cellulose fiber molding materials that contribute to decarbonization	https://news.panasonic.com/jp/press/jn250421-2?_gl=1*13s612l*_ga*NDk3MzE2ODM5LjE3NDgzMjQ3NTY.*_ga_K78QDTE73S*czE3NTAyMTUwNTk0b2QxJGcxJHJGcXNzUwMjE2NjQ1JG02MCRsMCRoMA..	
Production activities	Japan: The Energy Conservation Center, Japan (ECCJ) Energy Conservation Grand Prize 2024	Energy Conservation Best Practices Category Agency for Natural Resources and Energy Commissioner's Award (Transportation category)	Panasonic Corporation Living Appliances and Solutions Company Modal shift initiatives for Kyushu routes in response to the 2024 environmental and logistics issues	https://news.panasonic.com/jp/topics/206103
		Energy Conservation Best Practices Category ECCJ Chairman's Award	Panasonic Automotive Systems Co., Ltd. Global, full-employee participation in creating zero-CO ₂ factories and achieving carbon neutrality	
	Japan: The Promotion Foundation for Electrical Science and Engineering The 72nd Electrical Science and Engineering Promotion Award	Electrical Science and Engineering Promotion Award	Panasonic Industry Co., Ltd. Development of Pronounced Fine Cross, FineX	https://holdings.panasonic.jp/corporate/technology/awards/winner_2024.pdf
	Japan: Osaka Industrial Research Association The 74th (2024) Industrial Technology Award	Industrial Technology Award		

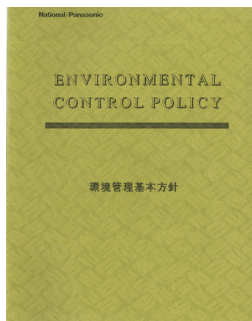
Environmental Management

Policy

Since its establishment, the Panasonic Group has been actively working on a wide range of environmental issues, starting with the pollution problems of the 1970s, under its management philosophy of contributing to the sound development of society. We formulated our Environmental Control Policy (Matsushita Environmental Charter) in 1991 to share our approach to environmental issues that have started spreading on a global scale. In 1993, we introduced our Environmental Statement as a step to serving society as a public entity, announcing our basic stance and increasing our activities globally.

We have announced our current Environmental Policy, both within the Group and to society at large, alongside our Environmental Statement, Environmental Action Guidelines (announced in 2013 as a public statement of our concrete activities; see following page) and our mid-term to long-term Environmental Action Plan. We look forward to each and every employee in the Group approaching environmental issues as laid out in this Policy and at the same time utilizing their technological strengths to create values that preserve and improve the environment. We expect these efforts to help the whole Group with its continuing development. In support of this, it is vital that we gain the understanding and support of our business partners and society at large. We are committed to environmental sustainability management through further support and cooperation with our stakeholders.

Environmental Control Policy (1991)



- Applied by all business sites worldwide
- Original text in English (Japanese text is a translated version)
- There are punitive clauses

Environmental Statement (1993)

Fully aware that humankind has a special responsibility to respect and preserve the delicate balance of nature, we at Panasonic acknowledge our obligation to maintain and nurture the ecology of this planet. Accordingly, we pledge ourselves to the prudent, sustainable use of the earth's resources and the protection of the natural environment while we strive to fulfill our corporate mission of contributing to enhanced prosperity for all.

A clear declaration of the principles described in our Environmental Control Policy, reflecting the thoughts and vision of our founder, Konosuke Matsushita.

In implementing effective environmental sustainability management, companies must share the vision based on the Control Policy, develop an action plan that defines KPIs^{*1} as key target issues to achieve the goal and fully implement the PDCA cycle^{*2}.

In terms of the vision, we announced the Matsushita Electric Industrial Group Environmental Vision in 2001. In 2017, we announced Panasonic Environment Vision 2050, which is designed to contribute to the realization of a society in which people are able to live in comfort with clean energy. In 2022, we announced our long-term environmental vision, Panasonic GREEN IMPACT (PGI) (See [page 15](#)).

In face of the growing need to address the impact of issues such as resources depletion and waste contamination for our customers, society and our business activities, we announced a Circular Economy (CE) Group Policy (see following page) to serve as the foundation of business management, to maintain and improve the value created by resources and to build an economy and society founded on resource recycling. The policy will be employed in identifying CE issues related to the distinctive characteristics of each business and in planning and implementing strategies and action plans.

Action plans so far introduced have been Green Plan 2010, our first long-term environmental action plan introduced in 2001, and Green Plan 2018, announced in 2010. These plans targeted important issues, focusing chiefly on CO₂ reduction and resource recycling. Green Plan 2018 was revised in 2013 in response to revisions to our management policy. Later in 2016, it was revised once again amid the adoption of the Paris Agreement at COP 21^{*3} to reflect the rising importance of CO₂ reductions and changes in our portfolio, including the expansion of our automotive and B2B businesses.

In 2019, we announced Green Plan 2021, which emphasizes issues linked to CO₂ reduction and resource recycling and synchronizes with our mid-term business plan. Timed to match the announcement of PGI in 2022, we established GREEN IMPACT PLAN 2024 (See [page 16](#)), our environmental action plan linked to our mid-term to long-term business strategy.

*1 KPI (key performance indicator): An indicator used by organizations for quantitative evaluation of processes and actions taken to achieve their respective goals.

*2 Method based on the framework, aimed at improving business operations and qualitative advancement, consisting of the four steps: Plan (develop a plan), Do (take action), Check (evaluate) and Action (make improvements) repeated in a cycle for continuous improvements.

*3 The 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC).

Environmental Policy

Environmental Statement (1993)

Environmental Action Guideline (2013)

Toward achieving a sustainable society, we will strive to develop our business through the creation of environmental value.

For this purpose, we will address environmental challenges through our business activities and will expand our environmental initiatives based on collaboration with stakeholders.

(1) Initiatives to address environmental challenges

- We will reduce CO₂ emissions through production activities and products/services.
- We will work to efficiently use resources by pursuing recycling-oriented manufacturing.
- We will conserve water resources through efficient use of water and prevention of contamination.
- We will reduce the impact of chemical substances on human health and the environment.
- We will consider and conserve biodiversity.

(2) Initiatives based on collaboration with stakeholders

- We will provide products and services that create environmental value for customers with our technological strengths.
- We will expand our environmental contributions with our partner companies.
- We will deepen communications with local communities and work as a team to address environmental challenges.

Environmental Action Plan

Environmental action plan "GREEN IMPACT PLAN 2024"(see [page 16](#)) to realize Panasonic GREEN IMPACT (see [page 15](#))

Circular Economy Group Policy (2023)

The Panasonic GREEN IMPACT is the long-term vision of the Group, reflecting our sincere determination to address global environmental issues and contribute to solving them through the impact of our business actions.

Acknowledging the contribution of resource efficiency to decarbonization as well as a necessity for decreasing resource consumption due to the earth's limited natural resources, we establish this Panasonic Group-wide Circular Economy Policy as a contribution to achieving a sustainable society.

Circular Economy describes an economic system aiming for the most efficient use of material resources along the product lifecycle. Within the frame of this policy, Panasonic Group Companies define their dedicated approaches, targets, and individual action plans based on the following circularity principles:

- | | |
|--|--|
| <p>(1) Maximize the product lifetime and maintain the material value with a focus on circular business models and product design, extended servicing, as well as through further enhancing recycling activities.</p> | <p>(2) Minimize the use of materials and extend the usage of recycled and renewable materials.</p> <p>(3) Make a joint approach with customers and partners for establishing circularity-oriented business operations, information sharing, and product usage options.</p> |
|--|--|

By establishing this circular economy policy, we will promote the transition of our business from linear to circular as part of our green transformation (GX) activities inside and outside Panasonic.

Mid-term to Long-term Environmental Vision Materiality

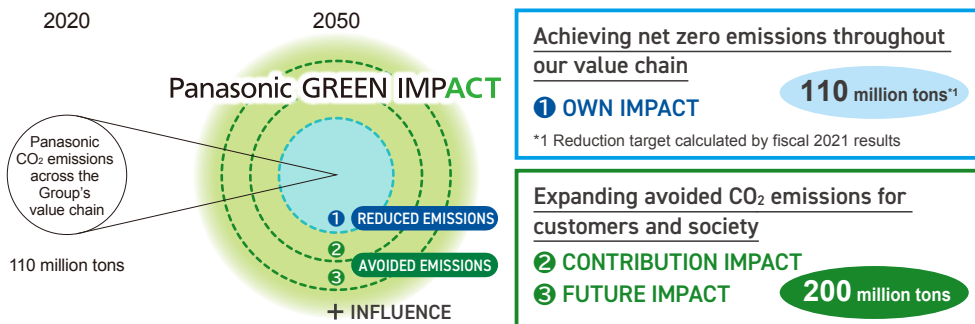
Future Vision of the Panasonic Group and solutions to global environmental issues

The true mission of the Panasonic Group is to achieve both of 'material and spiritual prosperity', in other words 'an ideal society with affluence both in matter and mind' that is pursued by our founder Konosuke Matsushita in his entire life. In 1932, the founder declared his ambition to create an ideal society over a span of 250 years. Since then, taking over the founder's ambition, we have solved social issues by manufacturing useful products and providing useful services, etc., while seeking for happiness of individual customers.

At present, the biggest obstacles preventing us from achieving our mission are global environment issues. In order to reduce depletion of limited natural resources and urgent problems caused by climate change or global warming as much as possible, it is indispensable to take actions to realize a carbon-neutral society (limiting the increase of global temperature to less than 1.5°C) and circular economy business systems. Panasonic has acted promptly to fulfill our corporate responsibility and contribution (ACT). Based on our strong determination to lead to solutions, we announced the Group's long-term environmental vision "Panasonic GREEN IMPACT (PGI)" that leads to achieve much greater contribution to definitely solve such problems in January 2022.

Under the Vision, we have accelerated our activities to reduce environmental loads through our value chains, and at the same time, to contribute to reduce CO₂ emissions discharged from society and customers.

As a part of resource depletion countermeasures, we announced the Circular Economy (CE) Group Policy (see previous page) in November 2023—both inside and outside the company. Through the Policy, we set out the foundations of business management as our contribution to building a sustainable and economically social system from the perspectives of corporate-led innovation and social system reform. The Policy helps us to identify CE-related issues according to business characteristics, as well as to plan and implement CE strategy.



[Panasonic GREEN IMPACT - About Panasonic Group - Panasonic Holdings Corporation](#)

Panasonic GREEN IMPACT

PGI is the Panasonic Group's overall vision for our environmental strategies with an eye on the business reforms to be completed by 2050 in order to achieve both "better lives" and "a sustainable global environment." PGI comprises different fields of CO₂ emissions reduction efforts.

1 OWN IMPACT refers to efforts within our own value chain, **2 CONTRIBUTION IMPACT** and **3 FUTURE IMPACT** are extended effort of contribution, and **+ INFLUENCE** is the positive impact on customers and society. PGI states that, through the above **1**, **2**, and **3** actions, by 2050, we aim to create an impact that reduces CO₂ emissions by at least 300 million tons^{*2} per year, equivalent to approximately 1% of global CO₂ emissions (31.7 billion tons) in 2020.

^{*2} Based on the total energy-related CO₂ emissions of 31.7 billion tons in 2020 (source: IEA), when PGI started. The emissions factor of avoided CO₂ emissions is based on the data of 2020.

1 OWN IMPACT (Reduced CO₂ emissions compared with fiscal 2021)

We aim to achieve net zero CO₂ emissions within our own value chain^{*3} (110 million tons^{*4}), along with the effect of the broader decarbonization of society^{*5}.

^{*3} Total of CO₂ emissions from our business activities (Scopes 1 to 3) including emissions from our operating companies (Scopes 1 and 2), emissions from manufacturing components and materials (Scope 3, Category 1), and emissions in product use (Scope 3, Category 11) (see [page 37](#) for details)

^{*4} Fiscal 2021 actual results

^{*5} Improvement in CO₂ emissions factor for electricity by respective electric power suppliers.

2 CONTRIBUTION IMPACT (Avoided CO₂ emissions in present business fields^{*6})

We aim to achieve avoided CO₂ emissions of at least 100 million tons per year among customers and society by 2050 through our present business fields.

3 FUTURE IMPACT (Avoided CO₂ emissions by creating new technologies and businesses^{*6})

We aim to achieve avoided CO₂ emissions of at least 100 million tons per year among customers and society by creating new technologies and businesses.

^{*6} Amount of our contribution as CO₂ emissions reduction to society and customers through using our products and services (see [page 18](#) for details).

+ INFLUENCE (Positive ripple effect of energy reform and decarbonization of society)

We aim to provide a positive influence on society by changing the behavior (ACT) of a wider range of people through the Panasonic Group's products, services, and social communications. We will accelerate energy demand stabilization and decarbonization through our contribution to behavioral changes in our customers, business partners, governments, and investors. Initially, we will undertake action from within our group, as a part of the PGI initiative.

(Examples)

- Promotion of concept of avoided CO₂ emissions (see [page 27](#) for details)
- Free publication of patents (for details, see <https://holdings.panasonic/global/corporate/panasonic-green-impact/action/influence.html#module-07>)
- Corporate citizenship activities (for details, see <https://holdings.panasonic/global/corporate/panasonic-green-impact/action/influence.html#module-04>)
- CO₂ ITAKONA Service (for details, see https://www.panasonic.com/jp/pex/business/quality_environment/itakona.html)
- Environmental education (for details, see <https://holdings.panasonic/global/corporate/panasonic-green-impact/action/influence.html#module-06>)

Environmental Action Plan “GREEN IMPACT PLAN”

As a milestone to achieve Panasonic GREEN IMPACT (PGI), we created and published the GREEN IMPACT PLAN 2024 (GIP2024) that sets out our groupwide environmental actions from fiscal 2023 to 2025, along with fiscal 2031 targets. We are keenly following this plan.

GIP2024 specifies a range of priority issue KPIs* including those for OWN IMPACT, the number of net zero factories, CONTRIBUTION IMPACT, factory waste recycling rate, expansion of recycled resin use, and the number of new circular economy business models.

Also, we continue working on issues related to biodiversity & Nature Positive (NP), water, chemical substances, local communities, and legal compliance, according to the characteristics of business fields and regions. This is because we understand the importance of addressing social issues and gaining the trust of society and customers concerning the Panasonic Group's actions. For details of each KPI and target, effort details, and results, see the table on the right and referenced pages.

* Key Performance Indicators (KPIs) are figures to quantitatively evaluate and analyze progress towards achieving the PGI targets.

■ Priority Issue KPIs and Targets

The Panasonic Group has been reforming our methods of group management to ensure sustainable growth. We plan to start a new mid-term strategy under the new structure from fiscal 2027 (announced in February 2025). As PGI is linked to business growth, we continue our environmental initiatives by setting single year targets(GIP2024+1) as an extension of the current GIP2024 for fiscal 2026. We have been stably

achieving a factory waste recycling rate of 99% or more over the last three years. We are now considering to set a new KPI for the next mid-term plan, to align with international trends.

The new plan will be updated seamlessly with new business strategies. We are constantly refining our efforts to build a sustainable society during the period specified in the next mid-term plan.

GREEN IMPACT PLAN 2024 Targets and Actual Results, Fiscal 2026 Targets (GIP2024+1) and Fiscal 2031 Targets

KPIs	Fiscal 2021 results (Starting point of PGI)	Fiscal 2025			Fiscal 2026	Fiscal 2031		
		Results	Targets	Achievements	Targets ^{New}	Targets		
		GREEN IMPACT PLAN 2024 +1						
Material issues	OWN IMPACT CO ₂ emissions reduction in our own Value Chain ^{*2}	(Starting point)	-38.11 Mt ^{*6} (19.01 Mt)	16.34 Mt	×	-40.12 Mt (17.01 Mt)	31.45 Mt ^{*9}	
		Scopes 1&2 ^{*1}	Net zero factories	Total 7 factories	Total 45 factories ^{*7}	Total 37 factories		Total 49 factories
		CO ₂ reductions	(Starting point)	0.83 Mt	0.26 Mt	○		0.81 Mt
	Scope 3 ^{*1} (Category 11)	CO ₂ reductions during use of our products by customers	(Starting point)	-25.23 Mt (17.62 Mt ^{*8})	16.08 Mt	×	-26.88 Mt (16.11 Mt ^{*8})	
	CONTRIBUTION IMPACT Avoided CO ₂ Emissions for society ^{*3}	(Starting point)	23.47 Mt	53.25 Mt	38.30 Mt	○	47.50 Mt	93.00 Mt
Resources/ CE [*] <small>*Circular Economy</small>	Factory waste recycling rate ^{*4}	98.7%	99.2%	99.0%	○	(New KPI under consideration ^{*10})		
	Recycled resin used ^{*5} (Fiscal 2023 to 2025 total for GIP2024 targets)	15,200 tons	Fiscal 2023 to 2025 total 45,000 ton	Fiscal 2023 to 2025 total 90,000 ton	×	Fiscal 2026 25,000 ton		
	Circular economy business models and products (Total)	5 businesses	15 businesses	13 businesses	○	16 businesses		
Continuing challenge	Biodiversity /NP [*] <small>*Nature Positive</small>	Reducing and restoring the impact of business activities on the ecosystem to become nature positive. (See page 68)	Water	Reducing water consumption in business activities and products/services. (See page 74)				
		<ul style="list-style-type: none"> - Procurement of sustainable raw materials. - Green space of operating units that contribute to biodiversity. - Products and services that contribute to biodiversity. 	Chemical substances	Reducing the environmental impact of chemical substances from business activities and products. (See page 77)				
			Local communities	Promoting environmental initiatives to contribute to local communities and educating the next generation.				
			Compliance	Ensuring compliance with environmental laws and regulations. (See page 75)				

*1 Classification according to the GHG Protocol (Accounting and Reporting Principles). *2 Amount obtained by subtracting the amount of emissions in the relevant fiscal year from the amount of emissions in fiscal 2021. *3 Amount calculated by subtracting the lifetime CO₂ emissions after introduction from the lifetime CO₂ emissions assuming that the Group's products and services do not exist, using the IEC 2021 value as the emission factor. *4 Amount of resources recycled / (Amount of resources recycled + Amount of landfill). *5 Mass of recycled materials contained in the recycled resin used in our products. *6 Minus sign (-) means increasing emissions. Including increases or decreases in Scope 1,2 and Scope 3 Category 11, Category 1 (procurement), Category 12 (disposal), and other indirect emissions. The figures in the parenthesis is a comparison with fiscal 2021 results (starting point) reflecting the equivalent amount of emissions from the products whose calculations became available after 2021. *7 Excluding Panasonic Automotive Systems Co., Ltd. *8 Amount of CO₂ emissions reduction since fiscal 2021, calculated with the 33 target businesses in Category 11 in fiscal 2021. *9 The CO₂ emissions factor for electricity calculated with the IEA World Energy Outlook's 2°C scenario. *10 Because the waste recycling rate remains at a high standard of 99% or more, we will exclude this from the fiscal 2026 targets and set a new KPI that matches current global trends.

Fiscal 2025 Results of CO₂-related KPIs

CO₂-related KPIs, including those for OWN IMPACT, CO₂ emissions, net zero factories, and CONTRIBUTION IMPACT (avoided CO₂ emissions), are core PGI indicators to achieve net zero CO₂ emissions across our value chains and for our cooperative efforts toward carbon neutrality together with customers and society. Emissions and avoided emissions are both CO₂-related indicators, but their calculation methods and usage are different. Emissions (upper part of figure) are an indicator representing the amount of CO₂ we need to reduce in our value chains. On the other hand, avoided emissions (lower part of figure) represent the amount of CO₂ emissions reduction from our customers or in society through our businesses that contribute to decarbonization.

CO₂ emissions from our own value chains cannot be offset or reduced by the avoided CO₂ emissions. These two indicators are two sides of the same coin, and at the same time, two pillars of our business activities. We are expanding and accelerating our emissions reduction impact through closely coordinating our efforts under both indicators.

CO₂ Emissions (Upper part of figure)

Scopes 1 and 2 emissions (CO₂ emissions from energy use in factories, etc.) in fiscal 2025 amounted to 1.37 million tons thanks to further introduction of energy-saving activities and renewable energy use. CO₂ emissions from using our products (Scope 3 Category 11) account for 70–80% of the total emissions in our value chains, and these emissions from 33 products marked 85.93 million tons in fiscal 2021, when we started PGI. This figure grew to 111.16 million tons in fiscal 2025, because the business coverage expanded to include 63 products.

The expansion of Scope 3 coverage (dotted area in the bar graph) was due to the widening of responsible areas in line with the introduction of stricter laws and regulations, growing social demands, and increase of strategic importance since 2022, when PGI was established. Contributing factors to this expansion include business growth, business portfolio changes and expansions (freezers, A2W, acquisition of Husmann Corporation, etc.) and extended coverage of disclosure (e.g. CO₂ emissions from motors and refrigerants).

Since the announcement of PGI in 2022, we have been gaining an understanding of the appropriate recognition and identification of areas subject to Scope 3, and improving the accuracy of our calculations. In GIP2024+1 that we set for fiscal 2026, we will revise

the starting point of OWN IMPACT so that our efforts are appropriately evaluated while maintaining the current framework.

When we focus on the emissions from the 33 businesses covered in fiscal 2021, the total emissions in fiscal 2025 were 68.31 million tons, which marks a reduction of approximately 20%. This reduction was achieved by several factors, including changes in sales volumes, evolution of energy-saving technologies, and improvement in the CO₂ emission factor for electricity.

Avoided CO₂ Emissions (Lower part of figure)

Avoided CO₂ emissions (CONTRIBUTION IMPACT) by our products and services in fiscal 2025 was 53.25 million tons, which significantly exceeded the target figure of 38.30 million tons by 14.95 million tons. The major contributors to this success were expansion of businesses that contribute to decarbonization, and inclusion of new products and services—a DC fan motor for air conditioners and refrigerators (see page 21), and a distributed storage battery system for data centers (see page 23). The number of products subject to CONTRIBUTION IMPACT

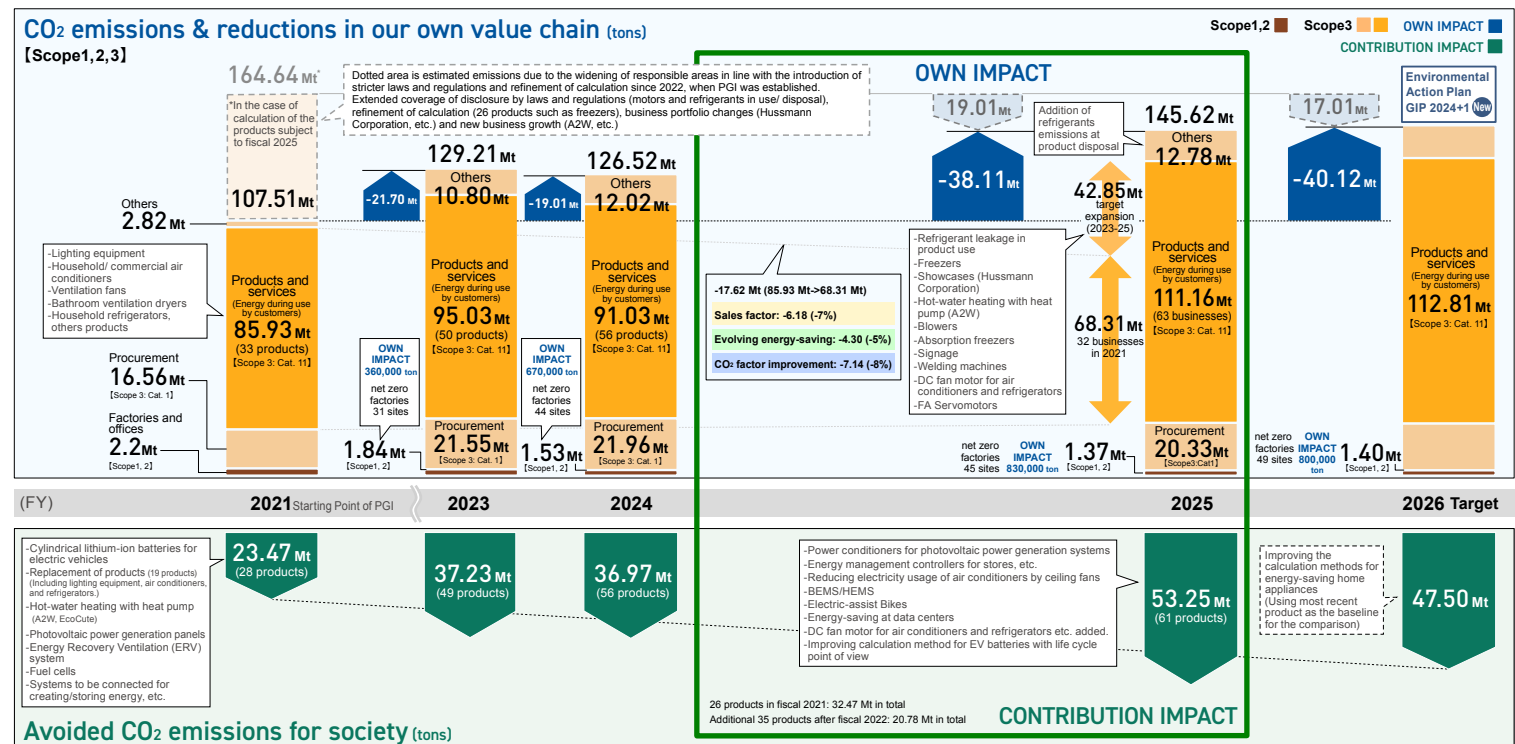
has increased to 61 in fiscal 2025 from 28 in fiscal 2021.

In fiscal 2024, we altered the emission calculation method for the automotive lithium-ion cylindrical battery series, which generates the greatest avoided emissions in the Group, to a life cycle-based method for better accuracy (only the running time was used in the conventional calculation). This change lowered the avoided emissions volume per battery.

Regarding the calculation method for avoided CO₂ emissions from new products with better energy-saving performance (“replacement” of products), we have used the hypothetical lifetime emissions of a conventional product to be replaced by the new product as the baseline for the comparison. We then use the difference in total emissions between the two as the figure for avoided emissions. From fiscal 2026, we will use emissions from the most recent market-average product as the baseline to comply with requirements for the international standard* for avoided emissions, which are currently under discussion. The fiscal 2026 target includes a reduction of approximately 9 million tons that proactively reflects the latest calculation methods, resulting in a reduction of approximately 10% year-on-year to 47.50 million tons.

*Please see page 27.

GREEN IMPACT PLAN 2024: Status of CO₂-related KPIs



■ Avoided CO₂ Emissions

Avoided CO₂ Emissions (hereafter, avoided emissions) is an indicator of how much we contributed to reducing CO₂ emissions (hereafter, emissions) from customers and society. We quantify this amount of contribution as KPIs of CONTRIBUTION IMPACT and FUTURE IMPACT according to the nature of the specific business (see page 15).

The amount of avoided emissions is calculated as the difference between before and after the introduction of a new technology, product, or service (hereafter, product), and refers to emissions across the product's entire life cycle, as well as from connected products and services. In the calculation, we set a hypothetical baseline scenario in which the new product is not introduced, and calculate the difference between emissions in the baseline scenario and those in the scenario where the new product has been introduced (emissions are not limited to the product's running time). When a company promotes the widespread use of its products, the emissions that would have occurred if the product had not been introduced are expressed as "Avoided Emissions."

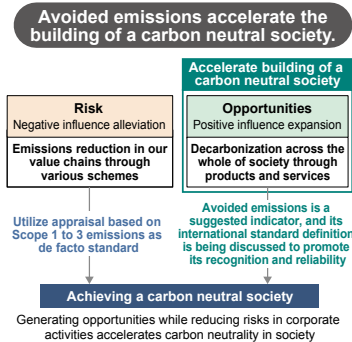
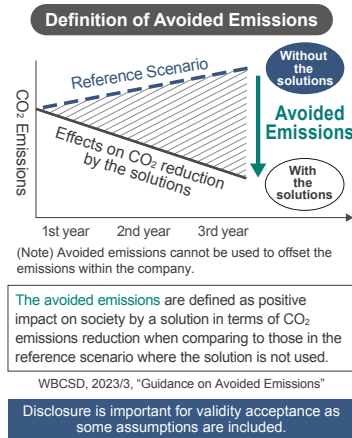
The total emissions across a corporation's value chain (Scopes 1, 2, and 3) are calculated based on an international standard called the GHG Protocol. The reduced volume of emissions (reduced emissions) is calculated in this process. PGI's OWN IMPACT is equivalent to this reduced emissions (see page 15). Reduced emissions and avoided emissions may appear similar, however, they are separate indicators with different purposes and different calculation methods. Avoided emissions cannot offset emissions from our own value chains.

Avoided emissions function as a quantitative indicator of the impact from a business provider or their solutions that contribute to the emissions reduction of other parties. By promoting use of this indicator for business appraisal and investment decisions, Panasonic aims to establish a fair way to evaluate decarbonization-oriented businesses and encourage competition.

CONTRIBUTION IMPACT through our products sold in fiscal 2025 reached a total of 53.25 million tons across 61 products. The figure was boosted by including data from eight more products. Our efforts for CO₂ emissions reduction can be divided into the following four categories.

- Electrification: Electrified appliances and components that use energy more efficiently than those that use fossil fuels.
- Replacements (Better energy-saving performance): Products with same functional performance but better energy-saving.
- Solutions: Products that optimize power consumption throughout entire building spaces and facilities.
- Others: Various contributions other than above, such as clean power generation, building insulation, etc

Along with the spread of renewable energy usage thanks to the efforts of energy suppliers (over-the-grid electricity suppliers in each area), improving energy efficiency is also important as it reduces the burden on electricity suppliers while encouraging further use of renewable energy. We contribute to improving energy efficiency in building spaces and infrastructure where our products are used—by means of avoided emissions. The concept of avoided emissions has existed for a while, although an international standard for its calculation method is still under discussion. Also, its recognition is still to develop in different areas of society, such as the financial sector.



Avoided emissions has yet to become an industry standard indicator as there remain issues to be resolved. For example, the interpretation of the hypothetical calculation—that is, the calculation for the case where the energy-saving product is not introduced—varies in terms of methods and disclosure conditions. To bring avoided emissions to a global standard (page 27), Panasonic is developing a rational calculation method compliant with existing electrical standards, and actively disclosing the targets, results, and contribution details*. As a part of these efforts, we renew the basic unit for reduction and baseline per product when we make our annual fiscal business plan. We will increase the competences of the businesses that contribute toward carbon neutrality, and aim at generating avoided emissions as much as possible through dissemination and long use of our products. This is one way in which we are contributing to building a carbon neutral society.

* On the premise of presenting avoided emissions, we set emissions reduction targets across our entire value chains (Scopes 1 to 3) in line with the 1.5°C scenario of the SBTi (page 39). We are currently working to achieve these targets (OWN IMPACT). We are also studying if there is any rebound effect as the products become widespread (as of now, we have not seen any rebound effect other than an increase in life cycle emissions due to the spread of products). To ensure the objectivity of our calculation methods and evidence for the data presented in this report, they are verified by a third party before disclosure.

For further examples of our avoided emissions products that contribute to CO₂ reduction for customers and society, see the following website.

<https://holdings.panasonic/global/corporate/sustainability/environment/vision/product.html>

CONTRIBUTION IMPACT

Calculation example : Disclosing by the Sustainability Databook 2025.

Category of Contribution Mechanism	Top 21 Businesses in FY2025	
Electrification 9.74 Mt in FY 2021 → 6 products 15.05 Mt	Cylindrical Lithium-ion Batteries for In-vehicle Use	Calculation example (P20)
	Hot-Water and Heating Systems with Heat Pump (A2W)	Calculation example (P19)
	Electrically-assisted Bikes	
	Hot-Water Heating with Heat Pump (EcoCute)	Calculation example (P19)
Total 6 products		
Replacements <Energy efficiency performance> 9.45 Mt in FY 2021 → 36 products 20.93 Mt	DC ¹ Fan Motor for Air Conditioner New Calculation example (P21)	Electric Showers/ Electric Water Heaters
	Household Air Conditioners	Electric Fans/Ceiling Fans
	LED Lighting	LCD TVs
	Household Refrigerators	DC ¹ Fan Motor for Refrigerator New
	Commercial Air Conditioners	CO ₂ freezers
Total 36 products		
Solutions 8 products 5.27 Mt	Distributed Storage Battery System for Data Centers New Calculation example (P23)	
	Energy-Saving of Air Conditioners by Ceiling Fan	
	Energy-Saving of Air Conditioners Energy Recovery Ventilators (ERV) System	Calculation example (P22)
	BEMS ² /HEMS ³	
Total 8 products		
Others 11 products 12.00 Mt	Photovoltaic Power Generation Systems (Japan, India, North America, Southeast Asia)	
	Vacuum Insulated Glass (P24)	Household Fuel Cell Cogeneration System/ Pure Hydrogen Fuel Cell Generators
	Home Delivery Communication Box (P25)	Lithium-ion Storage Batteries for Housing
	New kinari (P26)	
Total 11 products		
Total 61 products: 53.25 Mt		

Total 61 products: 53.25 Mt

Electrification

Hot-Water and Heating Systems with Heat Pump (EcoCute, A2W^{*1})

*1 A2W (Air to Water) : Air-to-water Heat Pumps for Europe

Main product life stages subject to avoided CO₂ emissions



Sales regions: **Japan for EcoCute, and Europe for A2W**

Overview

A heat pump (HP) is equipped with electrification technology that captures heat energy from the ambient air and transfers it to heat water or air utilizing the characteristic that temperature changes when gas is compressed or expanded. With the technology, the equipment with heat pump is 2.4 to 4.3 times more energy-efficient compared to the equipment uses heat energy from fossil fuel combustion.^{*2} Furthermore, on the premise that the ratio of renewable energy use in each energy sources will increase year by year as the electrified equipment with heat pump is spread, whereas CO₂ is always emitted from gas equipment in combustion of city gas, we will contribute to accelerate the transition to a decarbonized society.

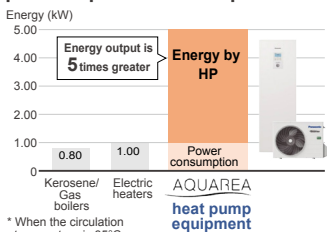
*2 Our own calculation based on information in METI's 'Top Runner Program'.

https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/equipment/

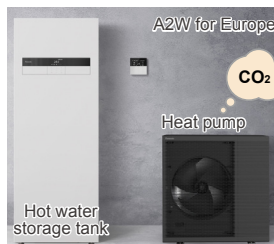
Avoided CO₂ emissions mechanism

Our heating system, which uses a heat pump of equivalent capacity, emits less CO₂ from the electricity used throughout its lifetime than the average gas combustion type hot water and heating system that is widely available in market.

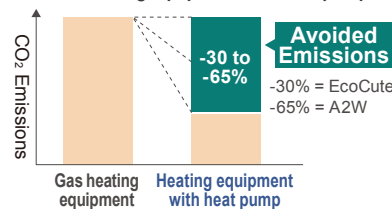
Comparison: Energy output per 1kW power consumption



* When the circulation temperature is 35°C.



Average CO₂ emissions from water & air heating energy by one gas heating equipment and one heating equipment with heat pump.



Baseline (Subject to comparison)

CO₂ emissions from combustion for the average gas water heater on the market in fiscal 2025^{*4} that produces the same amount of heat energy as when using a heat pump. Conventional gas by gas combustion is predominantly used in Europe where there are many cold climate areas. (Transformation of an A2W to its electrification is possible by using gas pipe used for the existing gas heating equipment.)

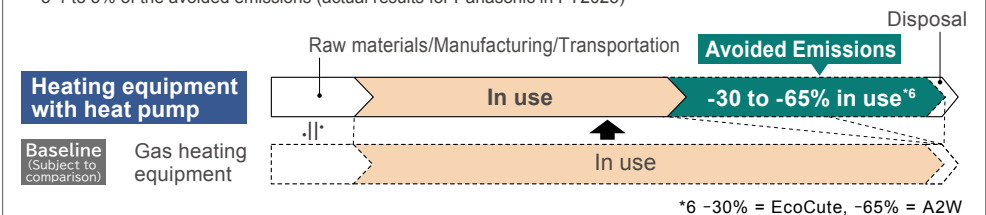
*4 From ANRE's Top Runner Program for Gas Water Heaters

https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/equipment/toprunner/14_gasonisui.html

Coverage of quantification (Concept and rationalization)

When the heating system uses a heat pump. Both heat pump systems and gas systems have a CFP*, and HP systems have a smaller CFP when they are not in use^{*5}. However, it is small compared to the difference with the CFP when in use, so we decided not to add it to the Avoided emissions to retain a conservative viewpoint in the calculation.

*5 1 to 3% of the avoided emissions (actual results for Panasonic in FY2025)



*6 -30% = EcoCute, -65% = A2W

Calculation formula of avoided emissions

Amount of activities	Avoided emissions for a given amount of activities	CO ₂ emissions-related values and factors	Period
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[Amount of activities] (Units)

The number of units that replaced existing gas heating equipment in the total annual sales volume^{*3}

*3 Japan: Approximately 70% of sales are heating equipment with heat pump replacing gas heating equipment. Europe: 100% of sales are heating equipment with heat pump replacing gas water heaters.

$$\left(\begin{aligned} &\times \left(\frac{\text{Annual city gas consumption per gas heating equipment (m}^3\text{)}}{\text{City gas CO}_2\text{ emission factor (kg CO}_2\text{/m}^3\text{)}} \right) \\ &- \left(\frac{\text{Annual power consumption per unit of the heating equipment with heat pump (kWh)}}{\text{Electric power CO}_2\text{ emission factor per sales region (kg CO}_2\text{/kWh)}} \right) \end{aligned} \right) \times \text{Period (Ten years)}$$

Annual avoided emissions by one heating equipment with heat pump replacing a gas heating equipment.

- **Electric power** CO₂ emission factor: Japan **0.487** kg/kWh, and Europe **0.277** kg/kWh (Source: IEA 2021)
- **City gas** CO₂ emission factor: **2.240** kg/m³ Data from the Ministry of the Environment used globally.

Amount of activities (Unit)

EcoCute: The number calculated by the following equation: the annual sales volume in Japan x 70%^{*7} which is the replacement ratio of gas heating equipment with heating equipment with heat pump.

*7 Our own calculation based on data from the Japan Refrigeration and Air Conditioning Industry Association (JRAIA).

A2W: The number of annual sales of A2W in Europe (Unit)^{*8}

*8 We deemed that replacement ratio of old A2Ws with new ones can be ignored as the sales started in 2008.

Avoided CO₂ emissions per unit of amount of activities (Latest basic unit)

Regarding the annual energy consumption used for the same amount for heating water or air, which was converted to CO₂ emissions, difference between those of heating equipment with heat pump and gas heating equipment.

Period (Flow method: Include entire lifetime CO₂ emissions of the product in its first sales year)

The holding years of repair parts. CO₂ emissions reduction effect continues during that period.

* CFP (Carbon Footprint of Products): CO₂ emissions converted from GHG emissions throughout the entire product life cycle—from raw material procurement to disposal and recycling of a product and service (per one unit).

Electrification Cylindrical Lithium-ion Batteries for In-vehicle Use

Main product life stages subject to avoided CO₂ emissions



Sales regions: **North America**

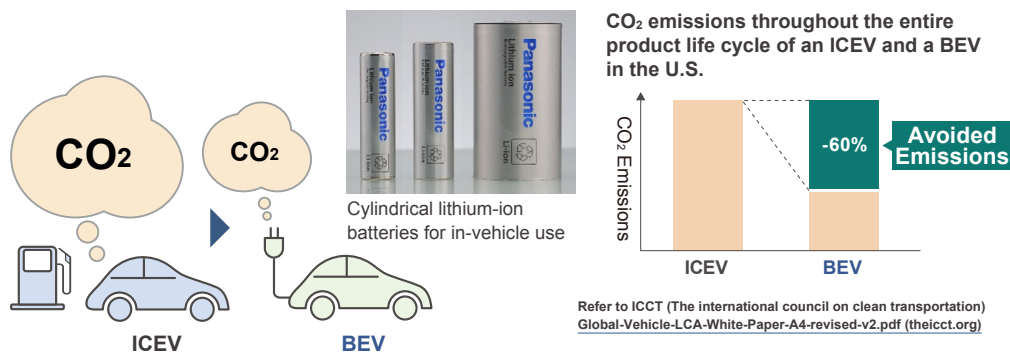
Overview

Transition from internal combustion engine vehicles (ICEVs) to electric vehicles (EVs) is expected to hasten decarbonization in transportation sectors all over the world as EVs, in addition to their energy efficiency advantages^{*1}, emit only small amounts of direct CO₂. In particular, Battery Electric Vehicles (BEVs) that do not use an internal combustion engine, employ a motor driven by electricity supplied from a rechargeable battery. Thus the rechargeable batteries that are equivalent to the fuel supply function in an ICEV, are recognized as one of the most important components of the BEV.

*1 Energy efficiency: The percentage of consumed energy that reaches to the wheels; BEV: 87–91% ICEV: 16–25%. Source: Yale Climate Connections. August, 2022 "Electrifying transportation reduces emissions and saves massive amounts of energy"

Avoided CO₂ emissions mechanism

In the case that a BEV and an ICEV with our rechargeable batteries installed drives the same distance, a difference arises between the amount of CO₂ emissions converted from fuel consumed by the ICEV and the amount of electricity charged and discharged in the BEV because BEV's energy conversion efficiency to electricity is high.

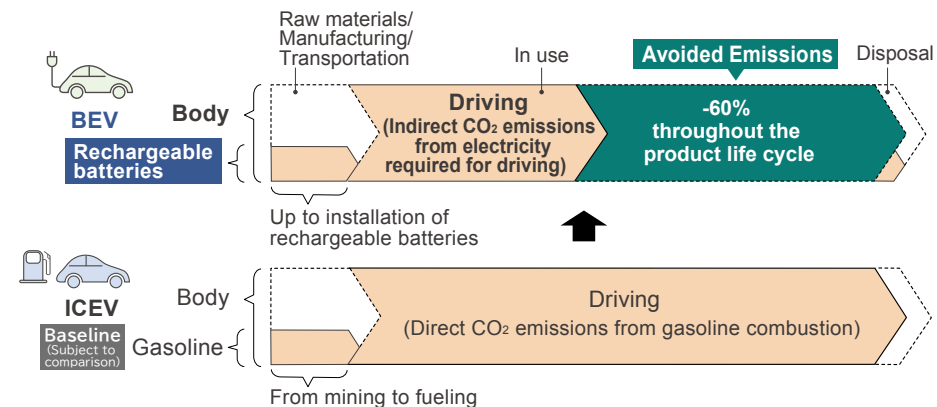


Baseline (Subject to comparison)

CO₂ emissions for an average ICEV throughout the entire product life cycle including gasoline usage.

Coverage of quantification (Concept and rationalization)

The difference in total CO₂ emissions for BEVs and ICEVs compared in emissions at each stage for rechargeable batteries or gasoline from mining raw materials, disposal, recycling and emissions during driving respectively.



Amount of activities (Unit)

CO₂ emissions converted from the number of sold cylindrical lithium-ion batteries for in-vehicle use per year to the number of BEVs.

Avoided CO₂ emissions per unit of amount of activities (Latest basic unit)

Difference in total CO₂ emissions per travel distance throughout the entire life cycle for one BEV replacing an ICEV.

Period (Flow method: Include entire lifetime CO₂ emissions of the product in its first sales year)

Lifetime travel distance.
 - Average annual travel distance respectively in Japan, U.S. and Europe^{*3} x Vehicle life (10 years)
 - CO₂ emissions reduction effect continues during that period.

*3 Assuming that vehicles equipped with cylindrical lithium-ion batteries are sold on the global market, we used the average for the three regions.

Calculation formula of avoided emissions

Amount of activities	Avoided emissions for a given amount of activities	CO ₂ emissions-related values and factors	Period
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[Amount of activities] (Units)
The CO₂ emissions converted from the number of BEVs of the battery capacity sold per year

*2 Not only during use of batteries (driving the vehicle), but also at every stage from the mining of raw materials needed for production, manufacturing, transportation, and disposal.

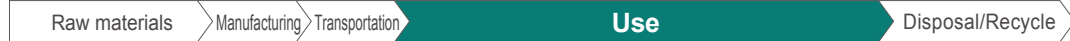
$$\times \left(\underbrace{\text{CO}_2 \text{ emissions for an ICEV throughout the entire product life cycle}^{*2}}_{(\text{kg CO}_2 / \text{km})} - \underbrace{\text{CO}_2 \text{ emissions for a BEV throughout the entire product life cycle}^{*2}}_{(\text{kg CO}_2 / \text{km})} \right) \times \text{Lifetime mileage}$$

Average annual mileage respectively in Japan, U.S. and Europe x 10 years

Annual avoided emissions per travel distance for one BEV replacing an ICEV

Replacements (Energy Saving) DC Fan Motor for Energy Saving in Air Conditioning Systems New

Main product life stages subject to avoided CO₂ emissions




Sales regions: Japan, Europe, North America, China, India, Southeast Asia, Central and South America, Middle East and Africa

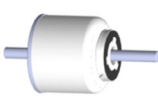
Overview
Improving energy efficiency in common electric appliances reduces the burden on the local electric grid where the appliances are used, and lowers concern for renewable energy supply sufficiency. In other words, it accelerates the shift to carbon neutrality driven by demand side of energy. Replacing old products with new ones with better energy efficiency reduces CO₂ emissions from both customers and energy suppliers. Motors in air conditioning systems are a major component in terms of overall system performance. Although the motor's power consumption is less than 10% that of the entire system, the motor's energy-saving performance directly reduces CO₂ emissions from the customer who uses the air conditioning system over the entire product lifetime.

Avoided CO₂ emissions mechanism
Compared to an Alternating Current (AC) motor, the speed of a Direct Current (DC) motor can vary according to the applied voltage or current, thereby reducing energy consumption losses.

Example
Annual power consumption of AC motor
5,897 kWh
Concentric motor

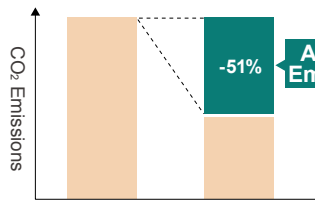


Annual power consumption of DC motor
2,876 kWh
AR-9H



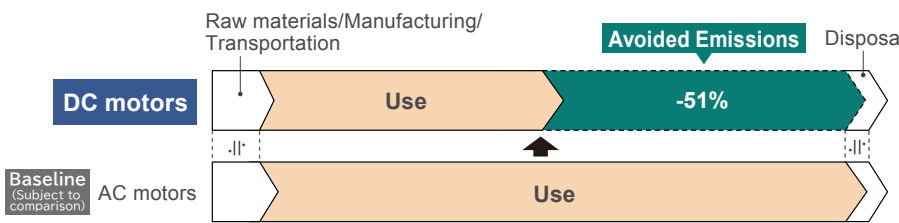
Energy-saving effect by switching from AC motors to DC motors: -51%

[Example] Comparison of CO₂ emissions converted from lifetime power consumption between AC motors and DC motors



Baseline (Subject to comparison)
The baseline is the volume of CO₂ emissions equivalent to the lifetime power consumption of an AC motor, that is an equivalent model to the DC motor, in the case that is used in the same conditions in each motor sales region. The areas where the air conditioning systems are used are assumed to be the same as the motor sales region.

Coverage of quantification (Concept and rationalization)
When the motor is in use. The subject of calculation is the motor's CFP*, and the CFP when in use is an average of 80 to 90% of the air conditioning system's total CFP. The CFPs of two systems, one with an AC motor (baseline) and the other with a DC motor, are the same when not in use. Therefore, we determined that we need only study the difference in the CFP between the baseline and the DC systems in use, ignoring the impact from any differences in the CFP at other times.



Calculation formula of avoided emissions

Amount of activities
Avoided emissions for a given amount of activities
CO₂ emissions-related values and factors
Other factors

$$\begin{aligned}
 & \text{[Amount of activities] (Number of units)} \\
 & \text{The number of units sold per year} \times \text{AC motor penetration rate per sales region} \\
 & \times \left(\text{Annual power consumption of AC motors (kWh)} - \text{Annual power consumption of DC motors (kWh)} \right) \\
 & \times \text{CO}_2 \text{ emission factor for electricity per sales region (kg CO}_2 \text{/kWh)} \times \text{Period (9 years)} \\
 & \text{Annual avoided emissions from energy-saving effect by one replaced product}
 \end{aligned}$$

Region	Factor
Japan	0.487
Europe	0.277
North America	0.383
China	0.623
India	0.723
Southeast Asia	0.386
Central and South America	0.252
Middle East and Africa	0.616

Amount of activities (Unit)
The number of annual sales depending on the status (penetration rate, etc.) per sales region for DC motor.

Avoided CO₂ emissions per unit of amount of activities (Latest basic unit)
Difference between CO₂ emissions converted from lifetime power consumption¹ between those from the products before and after replacement in each sales region.
^{*1} Rated power in design x annual time in use x efficiency

Period (Flow method: Include entire lifetime CO₂ emissions of the product in its first sales year)

- 9 years. (Product life defined by Panasonic)
CO₂ emissions reduction effect continues during that period.
- We deemed that 9 years for holding spare parts is a conservative estimate as the life of home appliances can be extended with appropriate use and maintenance.
- With the extended product life, further CO₂ emissions reduction effects are also expected because of efficient utilization of resources.

Avoided CO₂ emissions in fiscal 2025 : 8.16 million tons

* CFP (Carbon Footprint of Products): CO₂ emissions converted from GHG emissions throughout the entire product life cycle—from raw material procurement to disposal and recycling of a product and service (per one unit).

Solution (Reducing heat loss) Heat Exchange System

Main product life stages subject to avoided CO₂ emissions *1 Reduction in CO₂ emissions from reducing air conditioning heat loss from room spaces during the period of use of the products.



Sales regions: **Japan, China, North America, and Europe**

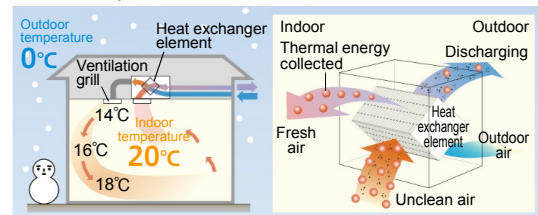
Overview

To achieve decarbonization in the consumer and business sectors, it is important to reduce environmental impact from air conditioning at living spaces in houses and offices. Energy Recovery Ventilators (ERV) System reduces heat loss from the interior of buildings and provide comfort maintaining appropriate air quality at the same time. ERV System exchanges heat of indoor and outdoor with a heat exchange element during ventilation and either heat or cool the air before being taken into the building, which reduces air conditioning load. Moreover, the system is equipped with air purifier that is a high performance system. Therefore, ERV System is used in wide areas in residential, commercial, and office buildings, where high air tightness is required including Japan, the U.S., Europe, and China.

Avoided CO₂ emissions mechanism

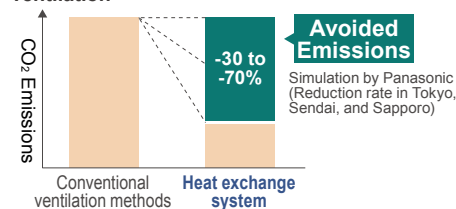
CO₂ emissions converted from the reduced amount of power or fuel consumption by adopting this ERV System in room spaces under the same conditions compared to those from average ventilation method for ventilation in the market.

How ERV System works (winter)



* Efficiency varies according to model.
<https://sumai.panasonic.jp/air/kanki/kodatekicho/>

CO₂ emissions converted from energy consumption with adjusted heat loss from ventilation



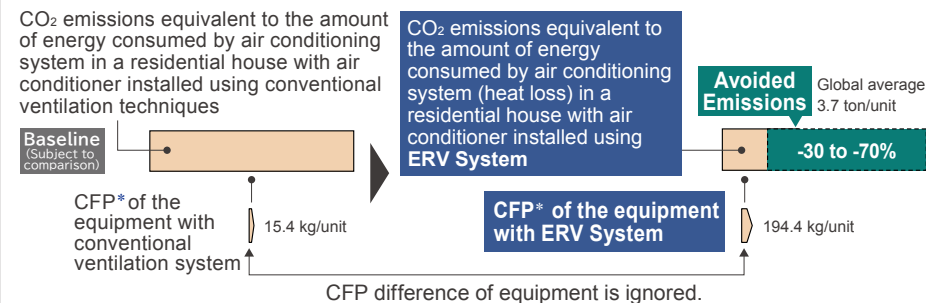
<https://sumai.panasonic.jp/air/kanki/kabekakefan/>

Baseline (Subject to comparison)

CO₂ emissions converted from power and fuel consumption per each sales region from the use of air conditioners in a residential house where the current average ventilation systems in the market is installed.

Coverage of quantification (Concept and rationalization)

Difference in the heating and cooling load of the house before and after installation of the heat exchange system (this product). The CFP* for this product is greater than for a conventional ventilation system; however, the equivalent CO₂ emissions from the difference in the heating and cooling load in a residential house before and after installation of a heat exchange air system is small (our calculation). Therefore, we decided that the effect can be ignored.



Calculation formula of avoided emissions

Amount of activities	Avoided emissions for a given amount of activities	CO ₂ emissions-related values and factors	Period
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$$\begin{aligned}
 & \left[\text{Amount of activities} \right] \times \left(\begin{aligned} & \text{Annual system installation volume (The number of heat exchange systems)} \\ & \times \left(\begin{aligned} & \text{Annual energy consumed by air conditioning in a residential house with conventional ventilation methods (volume of thermal loss) (kWh or liters)} \\ & \times \text{CO}_2 \text{ emission factors by electricity or fuel type in each sales region (kg CO}_2 \text{/kWh or liters)} \\ & - \text{Annual energy consumed by air conditioning in a residential house with a ERV System (volume of thermal loss) (kWh or liters)} \\ & \times \text{CO}_2 \text{ emission factors by electricity or fuel type in each sales region (kg CO}_2 \text{/kWh or liters)} \end{aligned} \right) \end{aligned} \right) \\
 & \times \text{Annual avoided emissions by installed one ERV System} \times \text{Period (Ten years)}
 \end{aligned}$$

Amount of activities (Unit)

The number of annual sales of heat exchange units, which is the core function of the system.

Avoided CO₂ emissions per unit of amount of activities (Latest basic unit)

We calculated the average air conditioning load from an average ventilation method in the living space of a residential house in Japan using our simulation for each sales region. We then determined the difference in the volume of energy consumed by system operation for air conditioning in living spaces between the conventional ventilation method and the energy exchanged method, and multiplied it by the CO₂ emission factors for electricity or fuel*1 by each sales region.

*1 Kerosene was used as the fuel.

Period (Flow method: Include entire lifetime CO₂ emissions of the product in its first sales year in one time.)

- Designed lifetime of ERV System (10 years)
- CO₂ emissions reduction effect continues during the period.

*CFP (Carbon Footprint of Products): CO₂ emissions converted from GHG emissions throughout the entire product life cycle—from raw material procurement to disposal and recycling of a product and service (per one unit).

- CO₂ emission factor for **electricity**: **0.487** kg/kWh in Japan, **0.623** kg/kWh in China, **0.383** kg/kWh in North America, and **0.277** kg/kWh in Europe (Source: IEA 2021)
- CO₂ emission factor for **kerosene**: **2.49** kg/liter Data from the Ministry of the Environment used globally.

Solution (Energy saving) Distributed Storage Battery System for Data Centers New

Main product life stages subject to avoided CO₂ emissions *1 Reduction of CO₂ emissions in data centers during the period of use of the products



Sales regions: **North America**

Overview

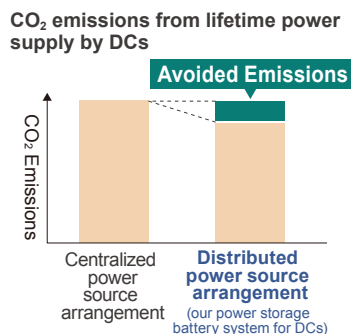
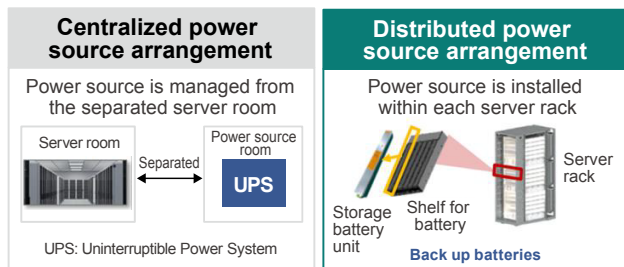
Along with the rapid evolution of generative AI, power consumption in data centers (DCs) is also increasing due to the growing complexity of and advancements being made in data processing. In such DCs, more and more storage batteries are being used. One type of power source arrangements in DCs is a common centralized power supply arrangement in which lead-acid and LFP-type batteries are placed in a room managed separately from the server room. The other is a distributed power source arrangement, where high-power and compact lithium-ion batteries are installed within each server rack. Compared to the centralized arrangement, the distributed arrangement is more efficient as a power supply to the servers. This is because the distributed arrangement is space saving, and allows finer electricity and source management, optimizing energy usage.

[Reference] DC storage battery business (Japanese) https://holdings.panasonic.jp/corporate/investors/pdf/20241127_ai_j.pdf

Avoided CO₂ emissions mechanism

The distributed arrangement requires less number of voltage conversions from the supply to the server, compared with the centralized arrangement. This improves power efficiency in DCs.

Wide ← Installation space → Narrow



Calculation formula of avoided emissions

Amount of activities	Avoided emissions for a given amount of activities	CO ₂ emissions-related values and factors	Period
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[Amount of activities] (Number of units)

The number of power storage battery system for DCs sold per year

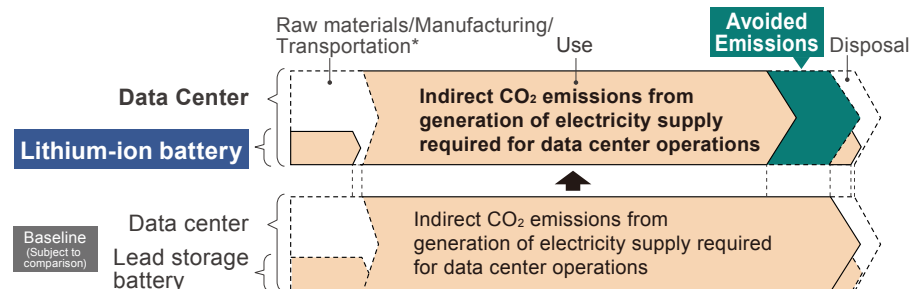
$$\begin{aligned}
 & \times \left(\text{Annual power consumption by centralized power source arrangement (MWh)} - \text{Annual power consumption by distributed power source arrangement (MWh)} \right) \\
 & \times \text{CO}_2 \text{ emission factor for electricity in North America (0.325 ton-CO}_2 \text{/MWh)} \times \text{Period (Designed product life (0.325 ton-CO}_2 \text{/MWh))} \\
 & \text{Annual avoided emissions from energy loss reduction by distributed power source arrangement}
 \end{aligned}$$

Baseline (Subject to comparison)

CO₂ emissions converted from lifetime power consumption by using distributed power source arrangement.

Coverage of quantification (Concept and rationalization)

DC's CFP* was deemed to be the same in the two arrangements, except in use. The calculation subject is the difference in CO₂ emissions from the storage batteries required to run the DCs in the two arrangements.



* A lithium-ion battery's CFP (1.6 kg/kWh) is about 80% of a lead storage battery's CFP (2 kg/kWh). This difference was not included in the avoided emissions to retain a conservative viewpoint in quantification.

[Reference] LCAs of lithium-ion batteries and lead storage batteries <https://doi.org/10.1016/j.jclepro.2022.131999>

Amount of activitie (Unit)

The annual sales of distributed storage battery systems containing lithium-ion batteries installed in DCs.

Avoided CO₂ emissions per unit of amount of activities (Latest basic unit)

Multiply the difference in the amount of electricity supplied from the centralized power source and the distributed DCs power source by the CO₂ emission factor.

Period (Flow method: Include entire lifetime CO₂ emissions of the product in its first sales of the year)

- Designed product life.
- CO₂ emissions reduction effect continues during the period.

* CFP (Carbon Footprint of Products): CO₂ emissions converted from GHG emissions throughout the entire product life cycle—from raw material procurement to disposal and recycling of a product and service (per one unit).

Others (Reducing heat loss) Vacuum Insulated Glass, Glavenir

Main product life stages subject to avoided CO₂ emissions *1 Reduction in CO₂ emissions from reducing loads in cooling or heating in the building during the period of use of the products.



Sales regions: **Japan**

Overview

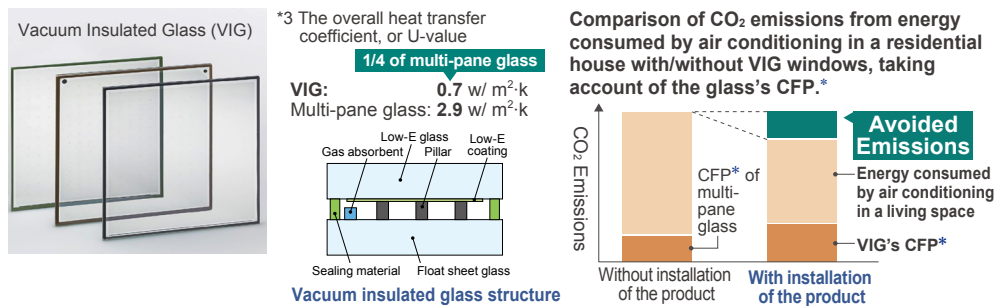
One effective means of achieving decarbonization in the consumer and business sectors is through reducing the air conditioning load in spaces in residential houses and offices by maintaining stable room temperatures through improved building insulation. In particular, heat inflow and outflow from windows account for 73% (inflow) of heat during summer cooling and 58% (outflow) during winter heating².

Our Vacuum Insulated Glass (VIG) achieves high insulation while at the same time maintaining its thinness, that can be adopted for existing openings (windows) in buildings as they are. Therefore, VIG has a potential to offer high applicability to a wide range of room spaces in different types of both new and older buildings.

*2 Source: Japan Construction Material & Housing Equipment Industries Federation (J-CHIF) (Japanese)

Avoided CO₂ emissions mechanism

Vacuum insulated glass (VIG) shows significantly higher thermal insulation compared to those of single-pane glass and Low-E multi-pane glass.³ CO₂ emissions converted from the reduced amount of power of electricity required for operation of air conditioning equipment by installation of the VIG for glass material of buildings.



Baseline (Subject to comparison)

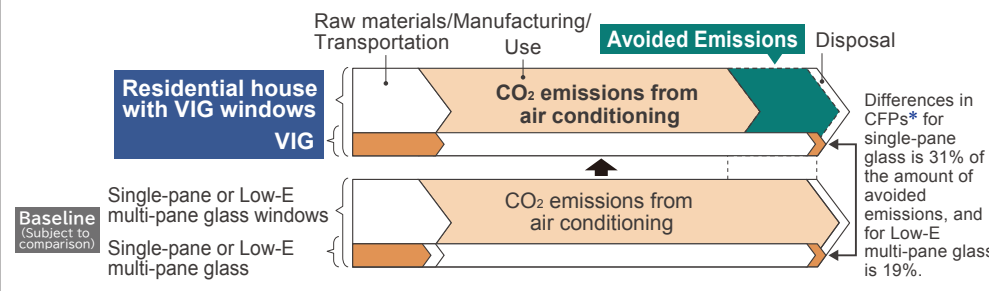
CO₂ emissions converted from electricity consumed by air conditioning operations in the entire space of a respective residential house in Japan.

For the installation of VIG, it is set that VIG replaces single-pane glass when reforming a house, and replaces Low-E multi-pane glass when building a new house.

Coverage of quantification (Concept and rationalization)

- In use: CO₂ emissions derived from electricity consumed by air conditioning in an entire residential house.
- Glass's CFP*: VIG's CFP* is greater than that of single-pane or Low-E multi-pane glass, however, there are no CO₂ emission from the glass in use.

The difference between the CFPs* from VIG and single-pane glass is 31% of avoided emissions, and the difference between VIG and Low-E multi-pane glass is 19% of avoided emissions. These differences were subtracted from the avoided emissions, instead of ignoring them.



Calculation formula of avoided emissions

Amount of activities	Avoided emissions for a given amount of activities	CO ₂ emissions-related values and factors	Period
[Amount of activities] (m ²) Amount of VIG sold per year	*4 Calculated based on our simulation using data from the Architectural Institute of Japan. *5 Calculated based on data from the Flat Glass Manufacturers Association of Japan, by Panasonic.		
×	Power consumed by air conditioning in a residential house with single-pane or Low-E multi-pane glass ⁴ per year (kWh / m ²)	−	Power consumed by air conditioning in a residential house with VIG ⁴ per year (kWh / m ²)
×	CO ₂ emission factor for electricity (kg CO ₂ / kWh)		×
			Period (Designed lifetime)
			Annual avoided emissions achieved by installation of 1 m ² of VIG
		−	(VIG's CFP* ^{*,5} (kg CO ₂ / m ²) − Single-pane or Low-E multi-pane glass's CFP* ^{*,5} (kg CO ₂ / m ²))

CO₂ emission factor for electricity Japan 0.487 kg/kWh (Source: IEA 2021)

Amount of activities (m²)

Amount of VIG sold per year.

Avoided CO₂ emissions per unit of amount of activities (Latest basic unit)

- In use: Differences in electricity consumed by air conditioning in residential houses per different type of glass.
Note: Annual power consumption was calculated by us, using a simulation of a two-story wooden house with a floor space of 120 m² based on standard weather data from the Architectural Institute of Japan using air conditioning heat load computing software.
- CFPs* for glass: Calculated by ourselves, per type of glass based on data from the Flat Glass Manufacturers Association of Japan.

Period (Flow method: Include entire lifetime CO₂ emissions of the product in its first sales year in one time)

- Designed lifetime of VIG.
- CO₂ emissions reduction effect continues during the period.
- We believe that the CO₂ emissions effects are estimated from a conservative view because the life of a Japanese residential house is generally deemed much longer.

* CFP (Carbon Footprint of Products): CO₂ emissions converted from GHG emissions throughout the entire product life cycle—from raw material procurement to disposal and recycling of a product and service (per one unit).

Others (Reduction of redelivery) Home Delivery Communication Box, e-COMBO

Main product life stages subject to avoided CO₂ emissions *1 Reduction of CO₂ emissions by home delivery services during the period of use of the products



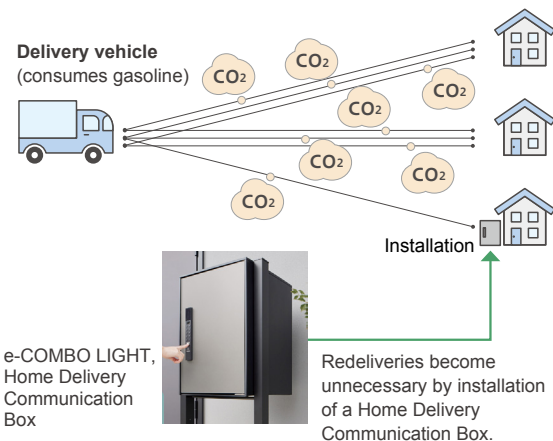
Sales regions: **Japan**

Overview

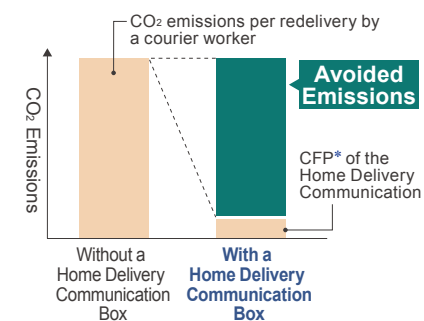
In the household business sector in Japan, because of increase in e-commerce trading and increase in the time when none is at home along with changes in lifestyle, load for distribution on couriers is on increase as the number of redelivery of goods increases. Installation of a Home Delivery Communication Box at home can avoid redelivery of goods, lowers the burden for the parcel receivers, and decreases the working hours of couriers workers. At the same time, it reduces CO₂ emissions from energy consumption such as fuel for deliveries, which contributes to reduction of load in local distribution networks and decarbonization.

Avoided CO₂ emissions mechanism

Reduction of CO₂ emissions from energy consumption (combustion of fossil fuel such as gasoline) required for courier workers to redeliver goods, by avoiding redeliveries.



CO₂ emissions with and without one Home Delivery Communication Box
(CO₂ emissions from a vehicle on redelivery by the courier worker and CFP* of the Home Delivery Communication Box)



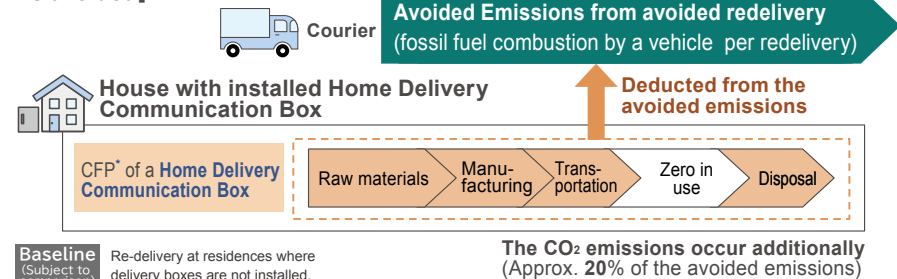
Baseline (Subject to comparison)

CO₂ emissions converted from the average energy consumption from redelivery of goods by courier workers, in the case that the receivers of the goods did not receive the goods at the first delivery as they were not at home where a Home Delivery Communication Box is not installed.

Coverage of quantification (Concept and rationalization)

When the box is in use (avoided emissions from avoided redelivery by installation of a Home Delivery Communication Box). Although the box emits no CO₂ when it is in use, the CFP* of the box itself is 20% of entire avoided emissions (by our estimation). However, this was not included in the avoided emissions as it is an additional effect.

[Situation where redelivery is avoided]



Baseline (Subject to comparison) Re-delivery at residences where delivery boxes are not installed.

Amount of activities (Unit)

The number of Home Delivery Communication Boxes sold per year.

Avoided CO₂ emissions per unit of amount of activities (Latest basic unit)

- Avoided emissions per redelivery: **0.46 kg** (Source: Verified data by MLIT)
- The number of redeliveries: Verified data by Panasonic

Period (Flow method: Include entire lifetime CO₂ emissions of the product in its first sales year)

- Designed lifetime of a Home Delivery Communication Box.
- CO₂ emissions reduction effect continues during the period.
- We deemed that the design life of the Home Delivery Communication Box is a conservative estimate for CO₂ emission effects as the box's life can be extended further with appropriate use and maintenance.

* **CFP** (Carbon Footprint of Products): CO₂ emissions converted from GHG emissions throughout the entire product life cycle—from raw material procurement to disposal and recycling of a product and service (per one unit).

Calculation formula of avoided emissions

Amount of activities	Avoided emissions for a given amount of activities	Values related to CO ₂ emissions	Period, etc.
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[Amount of activities] (Units)
The number of Home Delivery Communication Boxes sold per year.

$$\begin{aligned}
 & \times \left(\text{Avoided emissions per vehicle per redelivery (0.46 kg/redelivery)} \times \text{Annual number of redeliveries} \times \text{Period} \right) \\
 & - \text{CFP* of a Home Delivery Communication Box} \\
 & \quad \quad \quad \text{* Estimated by Panasonic}
 \end{aligned}$$

* Verified data by Ministry of Land, Infrastructure, Transport and Tourism (MLIT)

* Verified data by Panasonic

(Designed lifetime of the product)

Resource recycling
(Plant-based fiber materials)

High Concentration Cellulose Fiber Molding Material, kinari ^{New}

Main product life stages subject to avoided CO₂ emissions



Sales regions: **Japan**

Overview

The production volume of petroleum-derived plastic (hereafter, resin) is expected to increase to 610 million tons by 2030 from 450 million tons in 2020¹. However, its recycling rate is limited to 9%², posing a challenge in terms of waste recycling and carbon neutrality. For 20 more years in Japan, Panasonic has been recycling the home appliances that we produced, promoting recycling-oriented manufacturing. However, the single resin (high purity and quality) that can be manually collected from waste home appliances is limited to 20% of the entire resin used in a product. Also, much of the mixed resin (low purity and medium quality) collected by machine shredding cannot be used for new products.

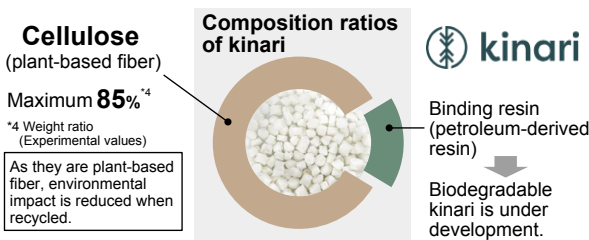
One of the solutions to this issue is replacing the resin components with bio resin, which is made from corn and other materials. Nonetheless other problems still remain, such as the impact on food production and occasional issues with functionality. Our high concentration cellulose fiber molding material, kinari, is made from plant-based materials such as forest thinning timber and industrial wastes, and has a competitive advantage due to its better density, strength, and price compared to other fiber materials. Kinari can contain up to 85% cellulose fiber, yet it is lighter than petroleum-derived resin. It can also be shaped by existing molding machines. Increasing use of kinari should contribute to building a circular economy and achieving carbon neutrality.

¹ Bioplastics 2020-2025 (IDTechEx Report)

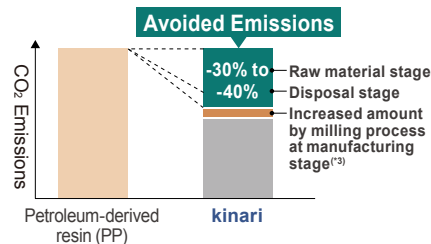
² Production, use, and fate of all plastics ever made | Science Advances

Avoided CO₂ emissions mechanism

Compared to a standard petroleum-derived resin molding, a kinari molding can offer a CO₂ emissions reduction effect in the phases of material procurement and molding disposal. Although kinari requires the shredding of plant materials, even taking account of the impact from such shredding, kinari molding's CO₂ emissions across its life cycle are smaller than those from petroleum-derived molding.



CO₂ emissions of petroleum-derived resin and kinari (CFP* comparison between molding product)



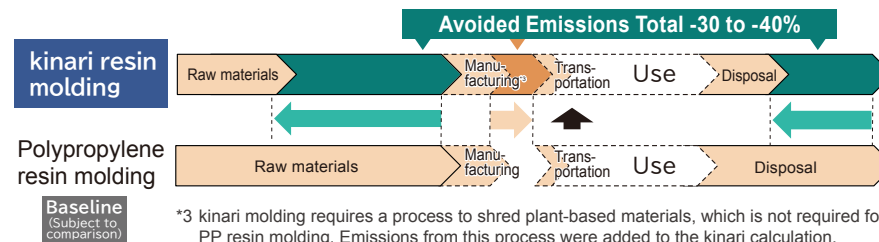
kinari – Molding solutions –
Business – Panasonic Production Engineering Co., Ltd. – Panasonic

Baseline (Subject to comparison)

CFP* for standard polypropylene resin molding.

Coverage of quantification (Concept and rationalization)

The difference in CO₂ emissions between kinari and the baseline must be determined covering the phases of material procurement, production, transportation, and disposal. However, we did not include the phases of production, transportation, and usage for quantification. This was because the difference in emissions during use was zero, and the production and transportation processes are identical for both kinari and the baseline.



Amount of activities (Unit)

The number of kinari packages sold per year (1 pack: 25 kg)

Avoided CO₂ emissions per unit of amount of activity (Latest basic unit)

The difference between CO₂ emissions⁵ across the life cycle of a standard PP resin molding and that of a kinari molding.

⁵ Figures calculated by us based on the SuMPO EPD program.

The calculations took account of the amount of carbon stock of kinari at disposal.

Period: Once

Reduction effect takes place once in a molding's life cycle.

Avoided CO₂ emissions in fiscal 2025 : 11 tons
Petroleum-based plastic reduction in fiscal 2025 : 2.4 tons



Tableware made with kinari

* CFP (Carbon Footprint of Products): CO₂ emissions converted from GHG emissions throughout the entire product life cycle—from raw material procurement to disposal and recycling of a product and service (per one unit).

Calculation formula of avoided emissions

Amount of activities	Avoided emissions for a given amount of activities	CO ₂ emissions-related values and factors	Period
[Amount of activities] The number of kinari packages sold per year (1 pack: 25 kg)	CFP* for standard polypropylene resin molding Calculated under the SuMPO EPD program	CFP* for kinari resin molding Including the amount of carbon stock of kinari at disposal.	1 (once) Reduction effect takes place once in a molding's life cycle.

$$\left(\text{Amount of activities} \times \left(\text{CFP* for standard polypropylene resin molding} - \text{CFP* for kinari resin molding} \right) \right) \times 1 \text{ (once)}$$

Activities to raise awareness of and valorize Avoided CO₂ Emissions

Under the current GHG Protocol, it is possible to evaluate CO₂ emissions from our business activities; however, it does not take into account the contribution to society through our business (opportunities, i.e., business chance) as of now. On the other hand, although there is a concept of the avoided emissions, in reality awareness of the avoided emissions is still low in society and no uniformed standard for the avoided emissions has been established. Therefore, it is a must to establish a structure to facilitate and encourage respective corporations efforts to decarbonation (technical development and innovation), as well as to contributes to the acceleration of the realization of a carbon-neutral society by preparing environment where respective corporation's contribution to decarbonization is properly evaluated.

Our environmental vision, Panasonic GREEN IMPACT (PGI), sets out the CO₂ emissions reduction targets not only for our company but also for society as a whole. It is important to spread significance of the avoided emissions as 'a standard measurement' to evaluate the corporation's contribution to decarbonization efforts and expand awareness of the avoided emissions, together with stakeholders such as corporations and financial institutions who share the same ambitions. Therefore, we are currently implementing the following activities regarding the avoided emissions towards its global standardization, and raising and spreading its awareness

■ Standardization Activities

International Electrotechnical Commission (IEC)

In September 2020, activities of standardization of a new IEC standard proposed by Japan's proposal started. Specifically, the activities are calculation of the avoided emissions from new technologies, such as AI, IoT, and a digital twin; provision of requirements for the calculation methods; establishment of requirements for communications and information disclosure, and preparation of an international standard IEC63372 titled "Quantification and communication of GHG emissions and emission reductions/avoided emissions from electric and electronic products and systems - Principles, methodologies, requirements, and guidance." In June 2025, the Final Draft International Standard was completed for IEC TC111 (Environmental standardization for electrical and electronic products and systems) and it is scheduled to be published as an IEC standard by the end of 2025, if progress continues smoothly. We are participating in this activity as a IEC technical committee member to promote standardization, such as through our proposal for calculating our avoided CO₂ emissions.

World Business Council for Sustainable Development (WBCSD)

WBCSD is a global organization of approximately 200 leading companies committed to sustainable development, working together to contribute to transformation to sustainable society. Endorsing the principles of WBCSD, Panasonic Holdings Corporation (PHD) joined WBCSD in 2022 to accelerate the Panasonic Group's PGI activities. Since publication of the Guidance on Avoided Emissions in 2023, WBCSD is reviewing its updated version and developing guidance for each industrial sector. We have been involved actively in their development, working in close cooperation with the organization and its member companies to conduct standardization and disseminate information on avoided CO₂ emissions.

Panasonic Holdings Joins WBCSD (World Business Council for Sustainable Development)

<https://news.panasonic.com/global/press/en221007-2>

GX League*

To establish a system whereby the opportunities for Japan's corporations contributions to climate change, such as by reducing emissions from the products and services they provide to the markets, are properly evaluated, Panasonic has participated as a leading member of the GX Business Working Group since its inception, in the area of rulemaking for market creation that is one of the GX League activities.

To expand awareness of the avoided emissions that is one of the disclosure items used in the Panasonic Group's long-term environmental vision in evaluating opportunities related to climate change, we jointly published with other GX league member company a collection of use examples by financial institutions in December 2023, and in May 2024 a virtual collection of recommended information disclosure by our operating companies, following to "the Basic Policy for disclosure and evaluation for opportunities related to climate change" published in fiscal 2023.

* GX stands for 'Green Transformation'. In February 2022, the Industrial Science and Technology Policy and Environment Bureau of the Ministry of Economy, Trade and Industry (METI) announced the GX League Basic Concept. GX League was launched as an apparatus where the company groups who are proactively working for GX with players in industry, government, academia and financial institutions challenge towards GX as a whole to discuss transformation of a whole society, economic and environmental system and implement activities to create new markets.

Establishment of the GX League Business Working Group and Appointment of PHD as a Leader – Building a Framework and Promoting Evaluation and Disclosure on Climate-Related Opportunities

<https://news.panasonic.com/jp/topics/204865>

■ Appeal of the avoided emissions at international events

As a result of our fiscal 2023 activities for raising awareness and dissemination of the avoided emissions at international events, the activities were clearly stated in the 2023 G7 outcome documents. We have continued working to raise awareness and valorize the avoided emissions in fiscal 2025.

COP29 (The 2024 Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC))

In November 2024, the Group gave a presentation on the importance of standardizing avoided CO₂ emissions and the progress achieved to date at a seminar titled “Moving forward with standardization of avoided CO₂ emissions in the industrial and financial sectors,” held at the Japan Pavilion. In addition, we reported that we are involved in standardization at the International Electrotechnical Commission (IEC) for IEC 63372 and that we are also working in coordination with ISO and WBCSD. We expect that standardization of avoided CO₂ emissions will lead to appropriate assessment of businesses that contribute to decarbonization by governments and financial institutions, and that the findings will be used in investment decision-making and in granting incentives. Additionally, we emphasized that it is important for the entire industrial sector to achieve the climate targets adopted at COP21, not only the electrical and electronic industries.

🔗 **Panasonic Takes Part in COP29 Discussions and Exhibition to share the Group's Contribution to a Decarbonized, Circular Economy-Based Society**

<https://news.panasonic.com/global/stories/16642>

CES2025

In the opening keynote at CES 2025 held in January 2025, we announced that resolving issues in the global environment is our top priority in building an ideal society that offers material and spiritual affluence and stressed the need to preserve a sound and healthy global environment for future generations. We stressed the importance of avoided CO₂ emissions by working in cooperation with WBCSD to speed up action on the development of and innovations for decarbonization technology across society as a whole.

🔗 **CES 2025 opening keynote Expressing Firm Determination to Solve Global Environmental Problems and Promote Business Transformation Using AI**

<https://news.panasonic.com/global/stories/17191>

Environmental Governance

Promoting Groupwide Environmental Sustainability Management Centering on PDCA

The Panasonic Group is committed to creating both a better life and a sustainable global environment by fulfilling its social responsibilities through its business activities, and at the same time engages in resolving major issues such as decarbonization of society and resource recycling through its products and services. We are executing our initiative in accordance with the following PDCA under the Group CTO (Tatsuo Ogawa, Executive Officer as of June 2025).

Based on the Environmental Policy (Page 14), each operating company, under its Autonomous and Responsible Management, sets key environmental KPIs and goals linked to its annual business plans, aiming to fulfill its environmental responsibilities and strengthen its competitiveness in line with common areas within the Group and the characteristics of its business. This common area is the GREEN IMPACT PLAN (GIP), the group's medium- to long-term environmental action plan. [Plan]

Achieving groupwide targets involves collecting monthly, quarterly and yearly business results as environmental performance data, sharing the data within each business division and across the Group and acting to address the various changes in the surrounding environment. [Do]

Annual performance data undergoes independent assurance through a third-party audit, including on-site audits, and is fed back to the Group and disclosed to the public. We apply the opinions and suggestions of our stakeholders in subsequent activities and measures for continuous improvements. [Check]

Since 2021, progress made in the KPIs established under GIP, as well as issues and social trends, are deliberated on by the Sustainability Management Committee (Page 4). Decisions on important issues are made swiftly at Group Management Meetings consisting of the Group CEO and the presidents of the operating companies. [Action]

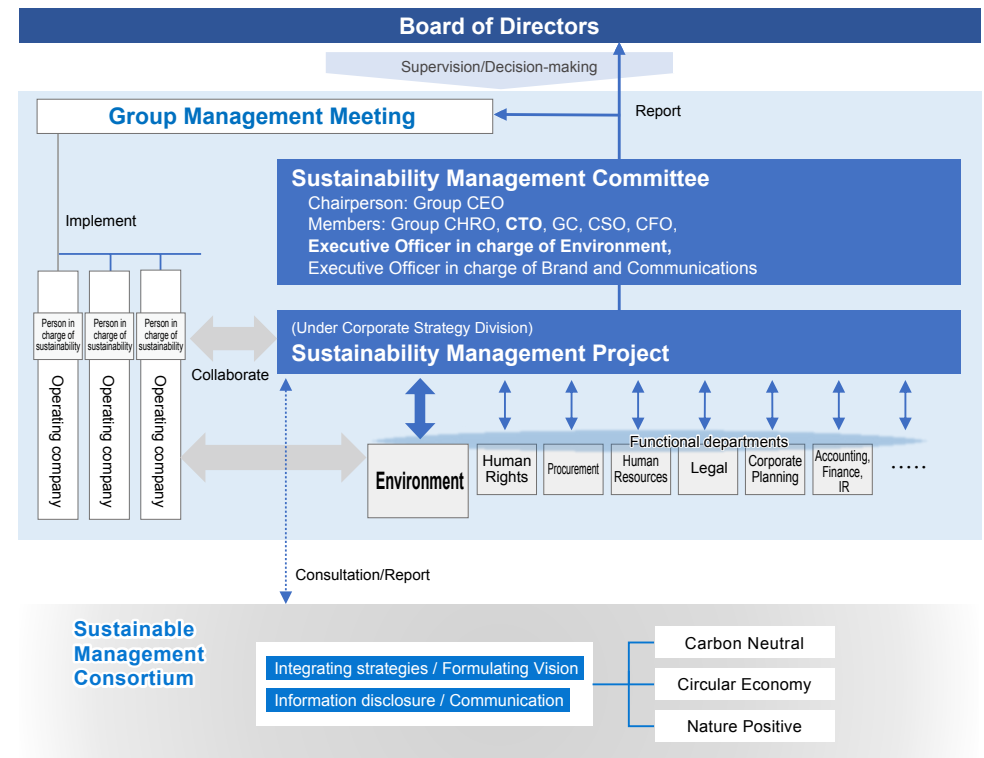
Through this process, the long-term environmental vision “Panasonic GREEN IMPACT” was formulated in 2022, and since then, a group-wide PDCA cycle has been implemented. Furthermore, the “Sustainability Management Project” was launched in 2024 to strengthen coordination in the activities such as information disclosure.

Initiatives on global environmental issues, which are seen as medium- and long-term issues for the entire Group, are becoming increasingly important and urgent each year. In order to accelerate decision-making and action, highly efficient information sharing and coordination across business fields has become vitally important. In addition to specialized committee activities on such as chemical substance control and CO₂ reduction at manufacturing factories,

the Sustainable Management Consortium, a groupwide community that voluntarily gathered to solve sustainability issues, was established in 2020 (approx. 1100 participants as of June 2025).

With the assumption that the ideas will be applied to their primary tasks, the consortium participants are working to define and incubate various common issues for the Group, shift gears to address these important issues, and accelerate problem-solving by pooling their collective wisdom. The activities of the Consortium platform utilize the expertise of each participant to allow them to coordinate functions and resources across organizational boundaries, improve productivity and act more swiftly.

Structure for Promoting Sustainability Management (as of June 2025)



* See page 4 for more details on Promotion System of Sustainability Management

Environmental Management Systems

Implementation of Environmental Sustainability Management Based on Environmental Management Systems (EMSs)

As the foundation of environmental sustainability management, Panasonic Group set up EMS at all of our manufacturing sites across the world in fiscal 1999, and has, in principle, continued to have the respective sites ISO14001 certified since then.

Moreover, in order to further strengthen the environment management world-wide, we set up EMS also at our nonmanufacturing sites; the respective sites also have obtained ISO 14001 certification. In October 2011, we published the Environmental Management System Establishment Guidelines that summarizes the EMS concepts for different business forms such as manufacturing, sales and services, and head office administration, aiming to build the EMS in accordance with the Basic Rules for Environmental Affairs on a global scale. Based on the Guidelines, we are implementing Environmental Sustainability Management to achieve the targets set in the GREEN IMPACT PLAN 2024+1.

Panasonic Industry Co., Ltd. and Panasonic Energy Co., Ltd. provide seminars for their members to learn the basics of the EMS, and training for auditors to work at different levels, such as internal and chief auditors. Due to the COVID-19 pandemic, holding trainings in conventional assembly form was impossible from fiscal 2021. The remote training scheme has enabled employees who could not participate in training because of time constraint participate in the training actively, resulting in highly effective training. Since fiscal 2024 when the pandemic subsided, holding training in face-to-face form has been possible, and some of our operating companies restarted training in hybrid form with face-to-face and online, utilizing merits of both forms. Furthermore, each operating company is upgrading its program contents to implement and enhance their management on sites. Such programs include practical programs including various methods such as roleplaying, and audit-related programs such as on audit policy and focused auditing points aiming to standardize internal auditors skills at high level.

As an independent activity focusing on legal compliance, an important element in the environmental management system, our Group holds cross-company mutual environmental audits (details on [Page 33](#)). The Panasonic Corporation of China organizes training for auditors carrying out cross-company mutual environmental audits every



Simulated on-site audit at Panasonic Kitchen Appliances Technology (Jiaxing) Co., Ltd.

year, inviting outside experts on environmental audits to give our auditors that latest information on environmental regulations and to strengthen their auditing skills and capabilities. In fiscal 2025, a simulated on-site audit was conducted at Panasonic Kitchen Appliances Technology (Jiaxing) Co., Ltd.

Acquired status of the ISO 14001 Certification (as of March 31, 2025)

Region	Number of certifications obtained*1		Total
	Manufacturing	Non-manufacturing	
Japan	18	10	28
North America & Latin America	9	0	9
Europe & CIS	6	1	7
Southeast Asia, & Oceania	33	7	40
China & Northeast Asia	41	1	42
India, South Asia, Middle East & Africa	6	1	7
Total	113	20	133

*1 The above number includes the one for integrated certification. The number of acquired status varies every year depending on the situation such as reorganization or closure of BDs, or promotion to acquire integrated certification.

🔗 Panasonic Group ISO 14001 Certification Sites

https://holdings.panasonic.jp/corporate/sustainability/pdf/eco_isolist2024.pdf

Environmental Information Systems

Integrated Management of Corporate Environmental Information

In order to implement the PDCA cycle for environmental sustainability management, it is essential to collect a significant amount of data, such as amounts of used energy, waste, valuables, discharged and transferred chemical substances, and used water, etc. at each business site in a prompt and accurate manner.

Panasonic Group has built and introduced an environmental performance system, the Eco System (Factory), to globally collect and manage environmental data from all of own business sites. With this system, monthly CO₂ emissions are managed in particular, allowing checking the progress of initiatives and identifying issues. The system plays an important role in achieving the reduction of CO₂ emissions by sharing the information and taking measures.

The Eco System (Factory) is also functioning as a scheme for sharing information on the status of compliance among sites across the world. In the event of complaints from local community residents or when a specific value exceeds

ordinance regulated levels, as soon as the person in charge at the business site inputs the data on the system, information of the data is instantaneously e-mailed to relevant persons at the operating companies and the Quality & Environment Division of Panasonic Operational Excellence Co., Ltd. Thereby, the system enables rapid information-sharing and appropriate actions.

In addition, Panasonic Group newly established an environmental information infrastructure, aiming to store and share the data necessary for promotion of Panasonic GREEN IMPACT, and for disclosure and appeal of the environmental data, in order to respond to legal demands appropriately and efficiently for environmental information disclosure and stakeholders' requests. The infrastructure centrally manages the information related to calculation and tally of CO₂ emissions across the entire value chain (Scopes 1, 2, and 3), as well as information on the avoided emissions.

As for products, legislation relating to chemical substances in products is becoming more stringent in the world, for example, and communication and disclosure of chemical information in the EU supply chain are mandatory under the REACH Regulations. The Panasonic Group has developed own management system for chemical substances in products based on industry-standard information handling methods in order to respond to a wide range of regulations

and requirements.

In January 2017, we renewed our product chemical substance management system to adopt chemSHERPA^{*1} based on EC62474, the international standard on material declaration for electrical and electronic equipment, i.e., declaration of information of chemical substances and materials comprise such products. Along with the expansion of Panasonic Group's automotive business, we also adopted the JAMA/JAPIA integrated data sheet,^{*2} the standard material data format for the Japanese automotive industry. These adoptions enabled us to respond to increasingly complex and diverse regulations covering the chemical substances used in products in a variety of fields. In addition, to strengthen the response to laws and regulations on chemical substances in products relevant to our automotive businesses, in October 2020 we enhanced the function to operate in conjunction with IMDS,^{*3} the standard system for the global automobile industry.

Furthermore, under the EU Waste Framework Directive, the requirements for information disclosure on substances of very high concern (SVHC^{*4}) to waste disposal companies and consumers have been enhanced, and registration of SVHCs with the SCIP^{*5} database of the European Chemicals Agency (ECHA) has become compulsory (starting on January 5, 2021). For handling registration with the SCIP database, we have strengthened the system-based coordination of information and started registration via the Panasonic Group system.

*1 New chemical information format led by METI and recommended by the Joint Article Management Promotion-Consortium (JAMP).

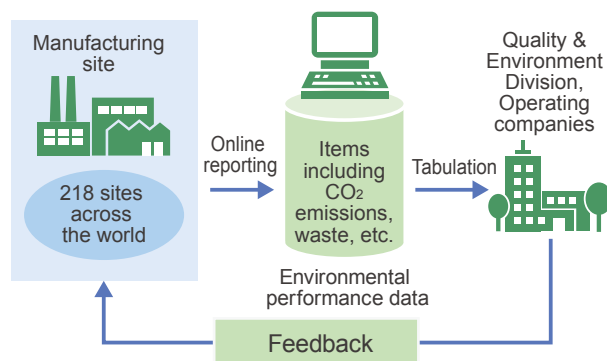
*2 A standardized survey datasheet for contained chemical compounds in Japan's automotive industry. The JAPIA Standard Material Datasheet prepared and introduced by the Japan Auto Parts Industries Association (JAPIA) is currently used as its successor tool.

*3 International Material Data System: Material data system for the automobile industry that are operated on a global scale.

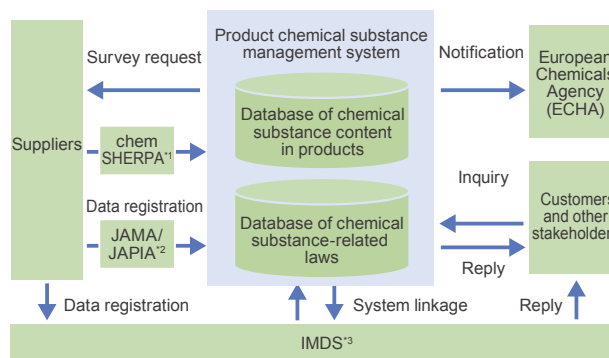
*4 Substances of Very High Concern

*5 Substances of Concern In articles as such or in complex objects (Products)

Mechanism of the Eco System (Factory)



Mechanism of the Product chemical substance management system



Eco-conscious Products and Factories

Initiatives for Eco-conscious Products (Green Products)

Panasonic Group conducts an environmental assessment to evaluate the product in advance in terms of its possible detrimental effects to the environment from the development stage. In the product environmental assessment, the five environmental issues specified in the Environmental Action Guideline have been set as assessing items for the whole product life cycle.

Products Assessment System

Product Environmental Assessment		
Items for assessment	Assessment criteria	
(1) Products	Prevention of global warming	CO ₂ emissions and energy saving
	Effective utilization of resources	Resource saving, light weight/downsizing, number of reused parts, durability, amount of recycled resources used, structure of easiness for removing batteries, structure to recovery/recycling, etc.
	Water and biodiversity conservation	Water saving, consideration for biodiversity
	Comparison with competitors' products	
(2) Production process (of relevant products)	Prevention of global warming	CO ₂ emissions and energy saving
	Effective utilization of resources	Resource saving, mass of packaging materials to be wasted, amount of resources used, amount of waste from factories, etc.
(3) Packaging	Effective utilization of resources	Resource saving, light weight/downsizing, amount of foamed plastic used, amount of recycled resources used, etc.
(4) Instruction manual	Effective utilization of resources	Resource saving, light weight/downsizing, amount of recycled resources used
(1) (2) (3) (4)	Management of chemical substances	Panasonic Group Chemical Substances Management Rank Guidelines (for products and factories)
LCA ^{*1}	Global warming	
Information management	Green procurement, information provision across the supply chain, etc.	

Laws/regulations and criteria, guidelines, and environmental action plan of Panasonic Group

*1 Life Cycle Assessment: Method of quantitatively assessing the environmental impact of products at each life cycle stage.

For global warming in particular that has been a big issue these days, we are working on eco-conscious products to achieve a target set to achieve 'an impact from our emissions reductions of more than 300 million tons by 2050' under our long-term environmental vision, 'Panasonic GREEN IMPACT'.

As for CO₂ emissions in our Group value chain, it is important to enhance energy-saving performance of products during product use, since most of the emissions are discharged when the products are in use. In the Energy Conservation Grand Prize 2024, Panasonic group companies won awards for two themes in the Product and Business Model category.

Category	Award	Recipient	Theme
Product/ Business Models	ECCJ Chairperson's Award (Home Appliance category)	Panasonic Corporation Heating & Ventilation A/C Company	Clothes drying dehumidifier F-YEX120B with the new eco hybrid system
	ECCJ Chairperson's Award	Panasonic Corporation Cold Chain Solutions Company Panasonic Housing Solutions Co., Ltd.	Freezing Reach-in Showcase using vacuum insulated glass (RE series)

📄 Panasonic won awards for four themes in Energy Conservation Grand Prize 2024

<https://news.panasonic.com/jp/topics/206103>



Clothes drying dehumidifier F-YEX120B



Freezing Reach-in Showcase FLD-REP9377LVG (3-Panel)

We use calculation of the carbon footprint (CFP) as an index for identifying the environmental performance of a product. CFP is a method of quantitative analysis and assessment of the quantity of greenhouse gases (GHGs) released in the various phases of the product life cycle by converting it to CO₂.

Panasonic Group's B2B companies such as Connect, Industry and Energy are increasingly requesting CFP calculation as part of their clients' requests to provide data and to support their clients' sustainability targets. In the B2C business related to consumer living, interest in CFP as a method of promoting each product's environmental performance is growing. In view of these developments, the Panasonic Group is engaged in accurate calculation of CFP vis-à-vis the objective in each business field and is utilizing the data in promoting certain products at exhibitions and fairs. We are also organizing seminars and developing guidelines specific to each business field to achieve an accurate and standardized calculation level across the entire Group.

Initiatives for Eco-conscious Factories

Panasonic Group We are leading Green Factories (GF) activities in its efforts to cut down the environmental load caused by manufacturing. On the assumption of compliance of laws and regulations in each factory, concretely we formulate a plan to reduce environmental loads in manufacturing activities, such as amounts of CO₂ emission, generated wastes and valuables, water consumption, and discharged and transferred chemical substances, conduct Progress management for total reduction amount with intensity of discharged amount and the like, and improve the activities. Thereby, we intend to achieve reduction of environmental loads and increase of our business at the same time. In fiscal 2011, we started the GF assessment system^{*2} aiming to further improve GF activities by visualizing the progress status in each factory.

In addition, Panasonic Group shares information on global activities for reducing environmental loads, relevant laws and regulations, and social trends through the Manufacturing Environmental Information Sharing Group. In Europe, Southeast Asia, China, and Latin America, we hold information exchanges and competitions on best practices by region to reduce environmental impact (presentation of awards for best practices and roll-out of good examples to other regions). By doing so, we promote GF activities suited to the issues in each region to expand and accelerate the activities.

As measures to strengthen the group-wide foundation aiming at improving the structures with energy efficiency, we have developed a BA (Before/After) chart search system to share and spread knowhow across the world on the Internet.

With the system, each factory can register and share their best practices concerning managing CO₂, waste, chemical substances, water, etc. In addition to the above, in response to environmental regulations, as a new activity to further ensure regulatory compliance in our sites, particularly those in China and Southeast Asia where we have numerous productions sites, we conduct a Cross-Company Mutual Environmental Audit that is carried out by our factories located in the same region, crossing the operating company's boundary. In India, full-scale introduction of the CCMEA started in 2023. The CCMEA were carried out in our 27 sites across the world in fiscal 2023, and has been rolled out to other sites. We had continued these activities during the COVID-19 pandemic, combining online meetings taking account of infection status in different regions, and were thus able to reduce risks and improve interactive skills. As the pandemic is settling down, we conduct the CCMEA effectively utilizing both online and offline, e.g. our Group members from Japan participated in the regional on-site audits. We aim to further enhance the environmental activities by accelerating to carry out the mutual audits worldwide, and encouraging mutual learning among members through ensuring compliance with relevant laws



Cross-Company Mutual Environmental Audit

and regulations, as well as utilizing expertise accumulated in our Group companies.

^{*2} The GF assessment system enables factories to evaluate themselves on a five-point scale across 19 environmental activity items, classified into six basic groups: emissions reduction; environmental performance enhancement; reduction activities; risk reduction; human resource development; and management. Factories then compare their self-assessment results with the results from other factories to obtain a relative assessment to identify issues to be addressed and determine corrective measures. The system was improved in fiscal 2014, in the way that items to assess could be added to the standard 19 items as required by each operating company. For example, a Company may implement tasks concerning compliance with environmental laws and compliance management to strengthen risk management in its factories. Then, in the assessment questionnaire, they can set questions with their own standard values stricter than the legal requirements, for example, for their ventilation systems or other facilities that control air and water quality.

Collaboration Across the Supply Chain

Collaboration with Suppliers and Transportation Partners

As the Panasonic Group backed by a number of suppliers, we must consider the environmental impacts of our entire supply chain, and not just of our own operations. Through our coordination efforts with suppliers and transportation partners, who form an integral part of our business operations, the Panasonic Group strives to minimize our environmental impact across the entire supply chain, focusing on the reduction of CO₂ emissions, resource recycling, chemical substance management, and biodiversity conservation.

Activities for Green Procurement

Since the publication of the “Green Procurement Standards” in 1999, the Panasonic Group has been promoting the manufacture of eco-conscious products in partnership with our suppliers. In the “Green Procurement Standards”, we set up groups of suppliers who support the Panasonic Group’s Environmental Policy in supplying products and materials in order to materialize the targets in supplier collaboration with our Group. In addition to cooperation in ‘reducing environmental impact in supplier’s business operation areas’ and ‘sharing achievements through collaboration with the Panasonic Group’, we are asking our suppliers to ‘seek the cooperation of upstream business partners’ to expand the scope of activities of reducing environmental impact throughout the entire supply chain. Working on our own targets to achieve both a better life and a sustainable global environment aimed in the “Panasonic GREEN IMPACT” in January 2022, we will expand our efforts to reduce CO₂ emissions throughout the supply chain. In October 2022, we revised “the Green Procurement Standards” to deepen and widen their influence throughout the entire supply chain—beyond our Group and across society—following the Panasonic Group’s environmental action plan. In fiscal 2024, we submitted a letter to all of approximately 13,000 suppliers who have business with Panasonic Group across the globe to deepen understanding of our activities of ‘Panasonic GREEN IMPACT’.

In response to more stringent and expanded regulations such as EU RoHS Directive, the Panasonic Group has been engaging in continual environmental quality assurance system audits of our suppliers since 2005 to improve the management level throughout the entire supply chain. In fiscal 2025, we conducted the audits at some 1,000 suppliers and have supported their efforts to upgrade their management levels for chemical substances in products.

Green Procurement Standards

<https://www.panasonic.com/global/corporate/management/procurement/green.html>

■ Estimation and Reduction of Environmental Impacts in Business Activities by Suppliers

In order to assess greenhouse gas (GHG) emissions across the entire supply chain (scope 3*¹), the Panasonic Group made original calculations based on the Greenhouse Gas Protocol, the international accounting standard for GHG emissions. Since fiscal 2012, the Panasonic Group has estimated its overall GHG emissions in the upstream range by multiplying the volume of materials purchased with the resource-specific GHG emissions per basic unit based on the Input-Output Table published by the Japanese government. The estimation results based on fiscal 2025 data is 20.33 Mt, roughly 15 times the GHG emissions of the Panasonic Group’s own production activities.

*1 Other indirect emissions, excluding Scope 1 (direct emissions from facilities owned and controlled by the Panasonic Group) and Scope 2 (emissions from production of energy consumed at facilities owned and controlled by the Panasonic Group).

To reduce CO₂ emissions with our suppliers, Panasonic Group is actively procuring low-carbon materials for resins, irons/steels, aluminum ingots, such as utilization of recycled resins and recycled irons/steels, and aluminum ingots refined using hydroelectricity. In fiscal 2025, we managed to reduce approximately 67,000 tons of CO₂ emissions.

■ Scheme to Procure and Supply Aluminum Ingots Produced using Hydroelectricity

The Panasonic Group has managed to stably procure and supply raw materials of aluminum products to be used for air conditioners, showcases, etc., utilizing a centralized purchasing system. From fiscal 2022, we have been procuring aluminum ingots refined using hydroelectricity through the centralized purchasing system and supplying it to aluminum processing manufacturers, which is an example for achieving CO₂ emissions reduction, while maintaining a stable procurement price. This is the first initiative in Japan’s electrical manufacturing industry.

More specifically, we import aluminum produced at overseas aluminum refineries using hydroelectricity, to Japan. Then, we supply the imported aluminum to multiple aluminum rolling/extrusion manufacturers in Japan to process them to aluminum plates, etc. Finally, our group procures the processed aluminum products from the manufacturers to utilize them in our products.

CO₂ emissions of the aluminum ingots refined using hydroelectricity are reduced to one third of the CO₂ emissions compared to those refined using conventional thermal power. Various aluminum products processed from the aluminum ingots become one of our various products in different forms such as air conditioners fin materials, aluminum frames for housing facilities, and lithium-ion battery casings. Since fiscal 2022, we have maintained a consistent supply of more than 8,000 tons of aluminum refined using hydroelectricity in Japan, thereby reduction of CO₂ emissions by 60,000 tons per year has been achieved. Procurement of such aluminum

ingots under our metal supply scheme utilizing a group-wide centralized purchasing system also stabilizes the price of aluminum ingots in the market.

■ Sharing Achievements through Collaboration with the Panasonic Group

Since fiscal 2010, the Panasonic Group has been working together with our suppliers in ECO-VC Activity^{*2} for procurement, aiming to reduce GHG emissions and achieve Recycling-oriented Manufacturing while also streamlining costs. This activity was expanded to China and other regions in Asia where full-fledged operation started in fiscal 2013 and further extended to a global scale in fiscal 2015. On its 15th anniversary in 2024, we renamed the ECO-VC Activity as 'ECOVC' to reposition it as an activity for value creation with our suppliers.

We have stored case examples of ECOVC in a database for broader and effective use throughout the Panasonic Group. At the same time, as for outstanding activities, we provide awards in occasions such as 'ECOVC awards and information exchange meeting'. Furthermore, the Panasonic Group formulated "an Environment Vision 2050" in 2017 to achieve 'a better life' and 'a sustainable global environment' compatibly, aiming for societies where residents use clean energy and live a more comfortable lifestyle. Under the vision, through the development of products, technologies, and solutions relevant to energy creation, storage, saving, and management, the Panasonic Group has worked towards creation and more efficient utilization of energy which exceeds the amount of energy used.

We added renewable energy to conventional evaluation items such as energy conservation (CO₂ emission reduction), cost reduction, resources conservation and use of recycled materials in fiscal 2019. In addition, since fiscal 2024, we have promoted decarbonization and reduction of CO₂ emissions in conjunction with the Panasonic GREEN IMPACT, collaborating with our suppliers. We will continue this ECOVC with our suppliers aiming to achieve CO₂ emissions reduction of 110 million tons from OWN IMPACT by 2050, as described in the "Panasonic GREEN IMPACT".

*2 ECO-VC Activity: Value Creation Activities

Environmental Achievements Made through Proposals

Items	FY2021	FY2022	FY2023	FY2024	FY2025
Number of proposals	430	332	264	236	265
CO ₂ reductions derived from proposals	110 kt	50 kt	80 kt	927 kt	55kt
Use of recycled resources derived from proposals	5 t	1,500 t	600 t	37,000 t	13,446t
Reduction in resources used derived from proposals	323 kt	255 kt	40 kt	19 kt	17 kt

■ Collaboration with Environmental NGOs

Following the announcement of the "Panasonic GREEN IMPACT", we further enhanced collaborative work with environmental NGOs overseas and deepened our CSR efforts in the supply chain.

Particularly in China, where the number of suppliers of our group is large and there are strong demands in the society for suppliers to properly respond to environmental matters, we are continually working together with the suppliers to reduce environmental loads by from requesting corrective actions as items require improvement for the issues found in the audit, and confirming whether the items are improved, aiming at further pursuing responsible procurement activities. Through confirming these CSR and environmental items on site, we will continue to comply with new regulations, social norms, and corporate ethics, and conduct procurement activities that fulfill our social responsibilities such as for human rights, labor, safety and health, and global environmental conservation.

Main activities to date

2016	Started collaboration with a Chinese NGO. Held Panasonic Group briefings on our CSR Procurement Policy and China's environmental regulations for approximately 400 suppliers in Guangzhou, Dalian, and Shanghai, in the same year.
2018	Conducted on-site environmental audits that focused on suppliers' responsiveness to environmental issues, together with CSR audits for approximately 20 suppliers per year.
2020	Continually implemented on-site and online audits for more than 20 suppliers per year.
2023	Reinforced the on-site audits at suppliers sites through the Group-wide Supply Chain Compliance Project.

In addition, we are continually improving suppliers CSR and environmental issues, collaborating with an environmental NGO in China, the Institute of Public & Environmental Affairs (IPE), through periodically sharing information on the latest laws and regulations in working group meetings, as well as requesting the suppliers with records of non-compliance for improvement every month.

In the Suppliers Green Supply Chain Evaluation ranking (CITI^{*3} and CATI^{*4}) that has been published by IPE since fiscal 2015, the Panasonic Group has consistently listed in the top rank each year. The Panasonic Group has been ranked as the second best in the CITI (total 40 brands) and as the top in the CATI (total 41 brands) for the household appliances industry in fiscal 2025.

*3 CITI: The Green Supply Chain Corporate Information Transparency Index

*4 CATI: The Corporate Climate Action Transparency Index

Overview of Environmental Impact and Environmental Accounting

Overview of Environmental Impact from Business Operation

In order to mainly manufacture and market electrical and electronic products, Panasonic Group consumes petroleum and electricity as energy sources and resources as raw materials of parts and components. As a result, we emit CO₂ and wastes into the environment.

Production: 218 manufacturing sites and 74 non-manufacturing sites

Logistics: Logistics stage of procurement, production, marketing and waste by partner companies and Panasonic.

Product use: Lifetime power consumption (a) of major products⁹ with large amounts of energy use and CO₂ emissions (b) associated therewith.

a = Annual power consumption of a model sold¹⁰ x Sales quantity x product life¹¹

b = Annual power consumption of a model sold¹⁰ x Sales quantity x product life¹¹ x CO₂ emission factor¹²

Recycling: Recycling of products means to use by oneself or to make into a state available for sale or free of charge the components and materials of a separated product.

*1 Included renewable energy by deemed certifications such as non-fossil certificates.

*2 Target substances include all substances in the Panasonic Group Chemical Substances Management Rank Guidelines (For Factories).

*3 The factors related to fuels are based on "the Guidelines for Calculation of Greenhouse Gas Emissions (version 4.7)" published by the Japanese Ministry of the Environment.

The latest figures from the "IEA Emissions Factors 2024" issued by the International Energy Agency (IEA) is used for the CO₂ emission factors for electricity purchased from different countries use. The factors for domestically purchased electricity in Japan for fiscal 2025 stated in the "Guidelines for Calculation of Greenhouse Gas Emissions" published by Japan's Ministry of the Environment.

*4 Release amount: Includes emissions to air, public water areas, and soil. Transfer amount: Includes transfer as waste and discharge into the sewage system. Recycling that is free of charge or recycling where we pay a fee for treatment under the Waste Management and Public Cleaning Law is included in "Transfer." (Different from the transferred amount reported under the PRTR Law.)

*5 Figures for Japan.

*6 Included refrigerant leakage in sold product use.

*7 Air conditioners, TVs, refrigerators/freezers, and washing machines/clothes dryers

*8 As for personal computers, PC 3R Promotion Association collects and recycles PCs under the joint scheme with member companies.

*9 Lighting equipment and lamps, Household air conditioners, commercial air conditioners, household refrigerators, washing and drying machines, ventilation fans, bathroom ventilation dryers, electric water heaters, electric fans, A2W (Hot-Water and Heating Systems with Heat Pump), EcoCute, electronic rice cookers, dish washer and dryers, LCD TVs, Organic EL TVs, microwave ovens, heat exchange systems, blowers, chip mounters, commercial display Cases, hair dryers, IH cooking heaters, dehumidifiers, range hoods, vacuum cleaners, irons, electric thermos pots, projectors, digital Signage, welding machine, welding robot, insertion equipment, printing equipment, Mobile Computer, electric bidet toilet seats, freezers, commercial refrigerators and freezers, absorption freezers, well water pumps, telephones, air purifiers, faxes, humidifiers, digital cameras, headphones, electrically-assisted bicycle, motors for air conditioning, motors for refrigerator, motors for FA application, etc.

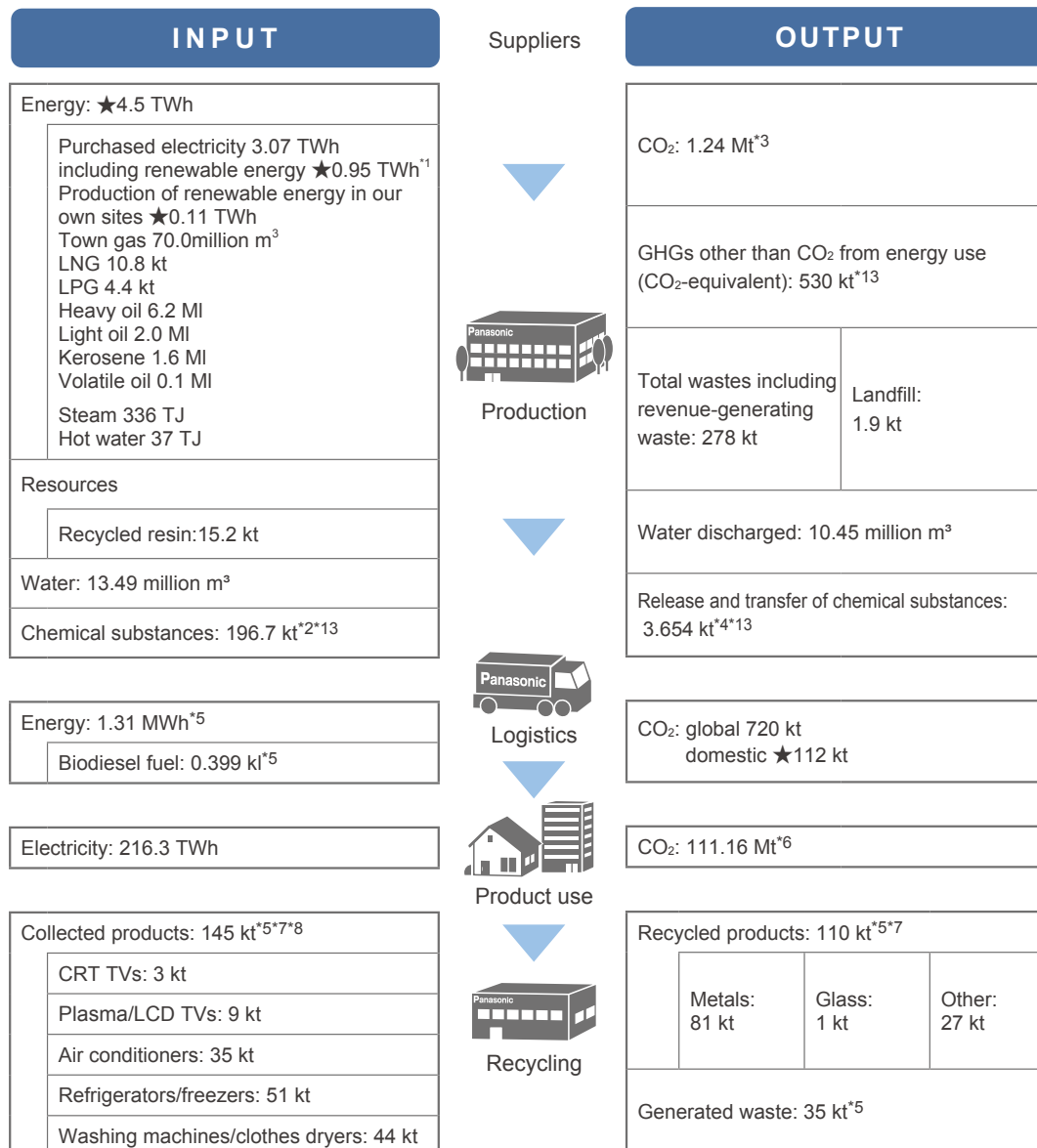
*10 For each product category, the model that was sold in the largest quantity in the region was selected.

*11 Number of years during which spare parts for the product are available (defined by the Panasonic Group).

*12 Regional CO₂ emission factors (kg- CO₂/kWh) used: 0.464 (Japan); 0.280 (Europe); 0.355 (North America); 0.589 (China & Northeast Asia); 0.732 (India & South Asia); 0.379 (Southeast Asia & Oceania); 0.222 (Latin America); and 0.379 (Middle East & Africa).

*13 Hussmann Parent Inc. and its consolidated subsidiaries not included.

Overview of Environmental Impact from Business Operation



GHGs from the Whole Supply Chain (by Scope)

We calculate our GHG emissions across the supply chain for Scopes 1, 2, and 3, respectively, according to the GHG Protocol and the guidelines provided by the Ministry of the Environment.

In fiscal 2025, the entire emissions for Scopes 1 to 3 totaled 145.62 million tons. The largest source of emissions per category was from Category 11 under Scope 3, which accounted for 76% of the entire emissions.

Compared with fiscal 2024, fiscal 2025 saw an increase in emissions of 19.1 million tons. The major cause was the proactive expansion of businesses covered under Category 11, causing that category's emissions to increase by 20.13 million tons. Also, facility investment anticipating business growth increased the Category 2 emissions by 480,000 tons. On the other hand, we reduced Scopes 1 and 2 emissions by 150,000 tons, thanks to steady efforts in implementing various energy-saving schemes and further introduction of renewable energy.

We continue to disclose our emission data for transparency.

*14 Direct emissions from facilities owned and controlled by the Panasonic Group (e.g., emissions from use of town gas or heavy fuel oil).

*15 Emissions from production of energy consumed at facilities owned and controlled by the Panasonic Group.

*16 Other indirect emissions, excluding Scope 1 and Scope 2.

*17 8.84 (Mt) are due to the influence of CFC

*18 6.06 (Mt) are due to the influence of CFC

*19 7.01 (Mt) are due to the influence of CFC

*20 6.18 (Mt) are due to the influence of CFC

Category		Emissions (kt)	
		FY2024	FY2025
Scope 1 ^{*14}		316	272
Scope 2 ^{*15}		1,207	1,099
Scope 3 ^{*16}	1. Purchased goods and services	21,954	20,324
	2. Capital goods	1,546	2,030
	3. Fuel- and energy-related activities	243	251
	4. Upstream transportation and distribution	741	720
	5. Waste generated in operations	1	1
	6. Business travel	31	30
	7. Employee commuting	107	106
	8. Upstream leased assets	–	–
	9. Downstream transportation and distribution	146	147
	10. Processing of sold products	234	170
	11. Use of sold products	91,027 ^{*17}	★111,151 ^{*19}
	12. End-of-life treatment of sold products	7,860 ^{*18}	7,999 ^{*20}
	13. Downstream leased assets	–	–
	14. Franchises	–	–
	15. Investments	1,108	1,322
total		124,995	144,246
Scope 1-3 total		126,518	145,616

Numerical values in units of (t) are introduced on the following website.

🔗 <https://holdings.panasonic/global/corporate/sustainability/environment/governance/data.html#scope>

Environmental Accounting

Panasonic Group globally collects data on its environmental conservation costs and economic benefits obtained through its environmental activities in relation to generated/controlled environmental impact. This data is internally utilized as basic information for our continuing environmental sustainability management.

Environmental Accounting for Fiscal 2025

Environmental conservation in factories	
Investments* ²¹	3,241 million yen
Expenses* ²¹ * ²²	61 million yen
Economic benefit* ²³	394 million yen

*²¹ Includes all investments relating to environmental conservation. The difference or appropriate portions (divided proportionally) are not calculated.

*²² Expenses include a cost of capital investment depreciation. For example, if latest energy-saving facilities were installed, the value includes depreciation for the first year but not for the second year and later.

*²³ The economic benefit represent the cost of energy savings achieved through energy conservation, which translates into cost reductions that contribute to climate change mitigation.

Environmental Conservation Benefits for Fiscal 2025 (in physical terms)

Categories	Emission reduction	Reference indicator: environmental impact	
		Fiscal 2024	Fiscal 2025
CO ₂ emissions from production activities	130 kt	1.37 Mt	1.24 Mt
Human Environmental Impact	47 kcount	386 kcount	339 kcount
Landfill of waste	- 0.4 kt	1.5 kt	1.9 kt
Water withdrawal	0.38 million m ³	13.87 million m ³	13.49 million m ³

Fiscal 2024 data on the reduced amount of electricity and effect of reduced electricity costs through our energy-saving products are as shown in the chart below.

Economic Effects for Customers for Fiscal 2025

Electricity cost reduction from product usage (global)	
Reduced amount of electricity* ²⁴	80.6 TWh
Reduced electricity costs* ²⁵	2298.0 billion yen

*²⁴ Calculated under the same conditions as when determining the size of contribution in reducing CO₂ emissions through energy-saving products (see [page 18](#)).

*²⁵ Electricity costs were set for each region based on IEA Statistics.

Panasonic Group published a new vision "Panasonic GREEN IMPACT" in January 2022, with the intention to realize the vision linking with our business activities. Therefore, approximately 477.8 billion yen for the group-wide total R&D expenses in fiscal 2025 will be invested mostly for promoting "Panasonic GREEN IMPACT".

Response to TCFD

Panasonic Group endorsed the TCFD recommendations^{*1} in May 2019. As Panasonic Group recognizes risks and opportunities concerning climate change as a critical management issue, we identify our business risks and opportunities and verify business resilience and strategy by thoroughly analyzing the scenarios, considering the TCFD's recommendation. We also disclose information on thematic areas recommended by TCFD, i.e., 'governance', 'strategy', 'risk management', and 'indices and targets', assuming future engagement with investors, etc.

*1 TCFD: an abbreviation of Task Force on Climate-related Financial Disclosures. The task force was set up by the Financial Stability Board (FSB) in response to a request by the G20 Finance Ministers and Central Bank Governors. TCFD published its recommendations in 2017.

Governance

Panasonic Group system to promote group-wide environmental sustainability management is headed by board of directors, so that information on group-wide environmental sustainability management from all of the operating companies are reported to the board of directors.

Since 2021, progress made in the KPIs established under GIP, as well as issues and social developments, are deliberated on by the Sustainability Management Committee. Decisions on important issues are made swiftly at Group Management Meetings consisting of the Group CEO and the presidents of the operating companies.

This process, under which the PDCA cycle is implemented throughout the Group, was announced in 2022 and is part of Panasonic GREEN IMPACT, our long-term environmental vision.

See [page 29](#) for more details.

Strategy

We analyzed impacts on certain items of Panasonic Group Businesses that are likely to affect climate change, based on our assessment of the risks and opportunities in Panasonic Group business operations. The results were used to develop a social scenario for the year 2050, focusing on matters with the greatest impact. We then used the scenario as the basis for examining strategies, and verified the business resilience in our strategy.

See [pages 41-44](#) for more details.

Panasonic GREEN IMPACT (PGI) is our transition plan to low-carbon economy as a Panasonic group. To support this transition, we have set up short-term targets in our Green Impact Plan (GIP) 2024. We have also set out following medium-term targets.

- Make our total CO₂ emissions (Scope 1 and Scope 2) net-zero by 2030.
- Reduce CO₂ emissions from use of our products that Panasonic Group sold by 30% compared with the 2019 level by the year 2030.

See [pages 52-55](#) for initiatives for Scope 1 and Scope 2.

Risk Management

As a tool to continuously reduce environmental risks, Panasonic Group is working to establish operating company-specific Environmental Risk Management Systems, in accordance with the basic risk management policy for all Group companies (see [page 141](#)). The management policy includes identification of environmental risks and group-wide risk management each year, and ensuring quick responses to reported environmental risks. In addition, The Panasonic Group is promoting risk management based on the same process at Panasonic Holdings Co., Ltd. and operating company. Once a year, the Enterprise Risk Management Committee identifies risks that could affect the entire Group based on changes in the external and internal environment and management's risk awareness. In fiscal 2026, the Panasonic Group addressed significant strategic risks related to environmental issues and climate change.

See [page 75](#) for more details.

Metrics and Targets

The Panasonic Group has set its medium- to long-term targets for reducing greenhouse gas emissions which were accredited SBT^{*2} 2.0°C in October 2017. Furthermore, in May 2023, our new greenhouse gas emissions reduction target was accredited as SBT 1.5°C.

In addition, we set long-term targets and received accreditation for our net-zero emissions targets.

*2 SBT: an abbreviation of Science Based Target. It is a target to reduce GHG emissions in consistent with scientific knowledge toward the goals to limit the increase of global temperature to less than 2.0°C, or less than 1.5°C if possible, above pre-industrial levels.

GHG emissions reduction targets (SBT 1.5°C accreditation)

	Targets	Progress rate
Emissions from Panasonic Group business activities (Scopes 1 and 2)	Reduce by 90% by 2030 (compared to FY2020) 2019: 2,311 kt	45%
Emissions from use of Panasonic Group products (Scope 3)	Reduce by 30% by 2030 (compared to FY2020) 2019: 95,040 kt	_ ^{*3}

*3 Progress rate not calculated due to increase in emissions because of expansion of products subject to calculation (see [page 37](#))

GHG emissions reduction targets (SBT net-zero accreditation)

	Targets	Progress rate
Emissions from Panasonic Group business activities (Scope 1, 2 and 3)	Reduce by 90% by 2050 (compared to FY2020) 2019: 127,039 kt	~ ³

Moreover, regarding indices related to climate change, we are discussing to set targets for following each item.

• Transition risk

In response to a rise in the awareness of environmental issues, we are particularly focusing on the risks associated with the introduction and expansion of environmental regulations and policies in the international community. The rise in energy procurement costs, forced purchase of emission credits, increase in manufacturing costs because of switching to use materials with lower environmental impact, and commoditization of low-carbon products, resulting from the introduction of carbon pricing, such as a carbon tax and the Emission Trading System, are all may adversely affect our Group's business operations and performance. In addition, any delay in taking action to take measures against these environmental issues may lead to a loss of business opportunities to expand in the European and other markets as well as a loss of business opportunities as a result of trade halts. Furthermore, our drive to use tax deductions, subsidies and other methods to gain business opportunities under regulatory systems for energy security assurance and climate change measures in these countries may adversely affect our Group's business since we will not be able to receive fruitful results as we expected.

• Physical risk

Each operating company assesses and monitors natural disaster risks, as well as their emergency responses to those risks. Each operating company also established financial assessment standards on the scale of the impact of the potential risks, rating the risk as high when the impact is more than 10 billion yen and as medium or low according to the impact risk.

• Climate-related business opportunities

As the target set under our PGI announced in April 2022, we will strive to reduce CO₂ emissions, with a aim of by 2050, achieving reduction impact of more than 300 million tons that is 'approx. 1%' of the total CO₂ emissions discharged all over the world as of now, through group business activities.

In addition to our business operations in the automotive battery business for environmentally friendly vehicles that are designed to significantly reduce CO₂ emissions and activities to reduce CO₂ emissions from our air quality and air conditioning business in Europe, we opened demonstration facilities for Panasonic HX at our Japanese sites in 2022 and overseas sites in

2024⁴. Panasonic HX is a solution based on our unique AI-based Energy Management System (EMS) that integrates three energy sources—pure hydrogen fuel cell generators, photovoltaic generators and storage batteries—to provide stable, renewable energy and effective energy use.

• Internal carbon pricing

Panasonic Group introduced internal carbon pricing (ICP) in March 2022 for capital investment, with a setting the price of CO₂ emissions at 6,000 yen/t-CO₂.⁵ We plan to increase the installation of energy-saving facilities and renewable energy-fueled equipment, including photovoltaic power generation, while maintaining economic rationality that is consistent in the future, by considering the impact of future carbon taxation and the like. As for further expansion in the scope of our activities and price setting, we will determine in line with our business decisions.

In order to accelerate our competitiveness in businesses contributing to 'carbon neutrality (decarbonization)' and 'circular economy', Panasonic Corporation, one of our Panasonic Group companies, introduced the ICP scheme where CO₂ emissions reduction in Scope 3 in our entire value chain and avoided CO₂ emissions contribute to society are used as criteria for investment decision, to all Panasonic Corporation in fiscal 2025.

Until now, priority investments have been made in the business of automatic demand response control for refrigerators and part of the Panasonic Factory Refresh business.

• Remuneration

Since April 2022, we have adopted a new performance evaluation system for executive remuneration of directors and executive officers of the holding company and of the presidents of the operating companies. The evaluation items for performance-based remuneration include those related to sustainability viewpoint such as environmental contributions. One of the examples of the contribution to our environmental performance index is reduction of CO₂ emissions in our own value chain.

*4 See <https://news.panasonic.com/global/press/en241203-3>

*5 Subject to change because of market conditions

Strategic Resilience through Scenario Analysis

To verify the strategic resilience of our business, Panasonic Group initially analyzed their impacts of climate change risks and conducted a scenario analysis based on the result of the impact analysis.

In the course of the impact analysis, we listed every possible impact on our business from climate change or measures against climate change, and then identified the risks and opportunities brought by such impacts by Panasonic Group's major businesses. The following table lists risks and opportunities by business, and integrated results of the different impacts of climate change (Table 1).

Table 1 Extracted Risks and Opportunities

		Risks	Opportunities	
Transitional risks	Policies/laws and regulations	Acceleration of carbon pricing	<ul style="list-style-type: none"> - Energy procurement costs increase. - Competition from low-carbon businesses intensifies toward carbon neutrality. 	<ul style="list-style-type: none"> - Energy procurement costs stabilize because of increased demand for renewable energy. - Businesses related to fuel cells, energy-saving products, solution services, and energy management expand. - Commercializing carbon fixation technology development
		Accelerated shift to electric vehicles	<ul style="list-style-type: none"> - As more firms enter the automotive business, competition intensifies. - Increased demand for automotive batteries intensifies material procurement competition. - Higher cost of automotive batteries production reduces car business profitability and pressurize costs of components. 	<ul style="list-style-type: none"> - Electric vehicle-related markets expand.
	Reputation	Increased environmental awareness among consumers	<ul style="list-style-type: none"> - Insufficient environmental efforts and promotion lead to unsupported by consumers. - Value shift from purchasing to leasing decreases sales. 	<ul style="list-style-type: none"> - Recognition as a sustainable company and of sustainable products attracts more customers. - Businesses related to low-carbon products, eco materials, and energy management expand.
		Increased risk to reputation	<ul style="list-style-type: none"> - Insufficient efforts in decarbonization reduce business opportunities. - Delay in responding to enhancing information disclosure reduces investment. 	<ul style="list-style-type: none"> - Recognition of environmental technologies and products increases business opportunities. - Increasing investment in the financial market by established recognition of avoided emissions.
	Technologies	Expansion of renewable energy usage	<ul style="list-style-type: none"> - Investment in facilities with renewable energy increases. 	<ul style="list-style-type: none"> - Highly efficient solar cells open new markets.
		Expansion of carbon-free power generation	<ul style="list-style-type: none"> - Production energy procurement costs increase. - Regional disparity of carbon-free power generation lead to review the strategies of production sites. 	<ul style="list-style-type: none"> - CO₂ emissions reduction throughout product lifecycles encourages shift to electric vehicles leading to related market expansion. - Utilization of new hydrogen energy markets.
		Spread of ZEH/ZEB	<ul style="list-style-type: none"> - Low-carbon products in housing equipment become mere commodities. 	<ul style="list-style-type: none"> - Increased opportunities to provide energy management & total solution services through housing equipment and home appliances. - Demand for heat insulation materials increases.
		Replacement with low-carbon products	<ul style="list-style-type: none"> - Increases development costs of lightweight and robust materials for competitive low-carbon products. 	<ul style="list-style-type: none"> - Increases demand for materials that contribute to reduction of energy consumption.
		Streamlining of supply chain	<ul style="list-style-type: none"> - Expanded capital investment puts stress on balance sheet. 	<ul style="list-style-type: none"> - Demand for energy management systems increase. - Lower prices from reduced production costs increase sales by data optimization.
	Markets	Promoting a circular economy	<ul style="list-style-type: none"> - Delay in recycling and reuse technologies increases costs. - Resource recycling does not suit consumers' tastes. - Delay in responding to circular economy regulations reduces business opportunities. 	<ul style="list-style-type: none"> - Business models change to circular economy-based models. - Demand for recycled resources increases.
Physical risks	Chronic	Constant temperature rise	<ul style="list-style-type: none"> - Poor health of employees reduces productivity. - High energy consumption from excess usage of air conditioners puts off consumers. 	<ul style="list-style-type: none"> - Businesses related to healthcare, air conditioning and ventilation, energy management, housing, and cold chain expand. - Entering the plant factory-related businesses adapted to the food crisis.
	Acute	Physical risk management related to climate change	<ul style="list-style-type: none"> - Suspension of operations at our factories. - Negative impact on supply chain. 	<ul style="list-style-type: none"> - Demand for needs of resilient infrastructure increases. - Fuel cell business with resilience expands. - Disaster-resilient manufacturing by managing risks with BCPs.

The following figure shows the impact analysis results of climate change risks (Figure 1) regarding the results of analyzed factors based on the identified risks and opportunities and analyzed impact on our businesses.

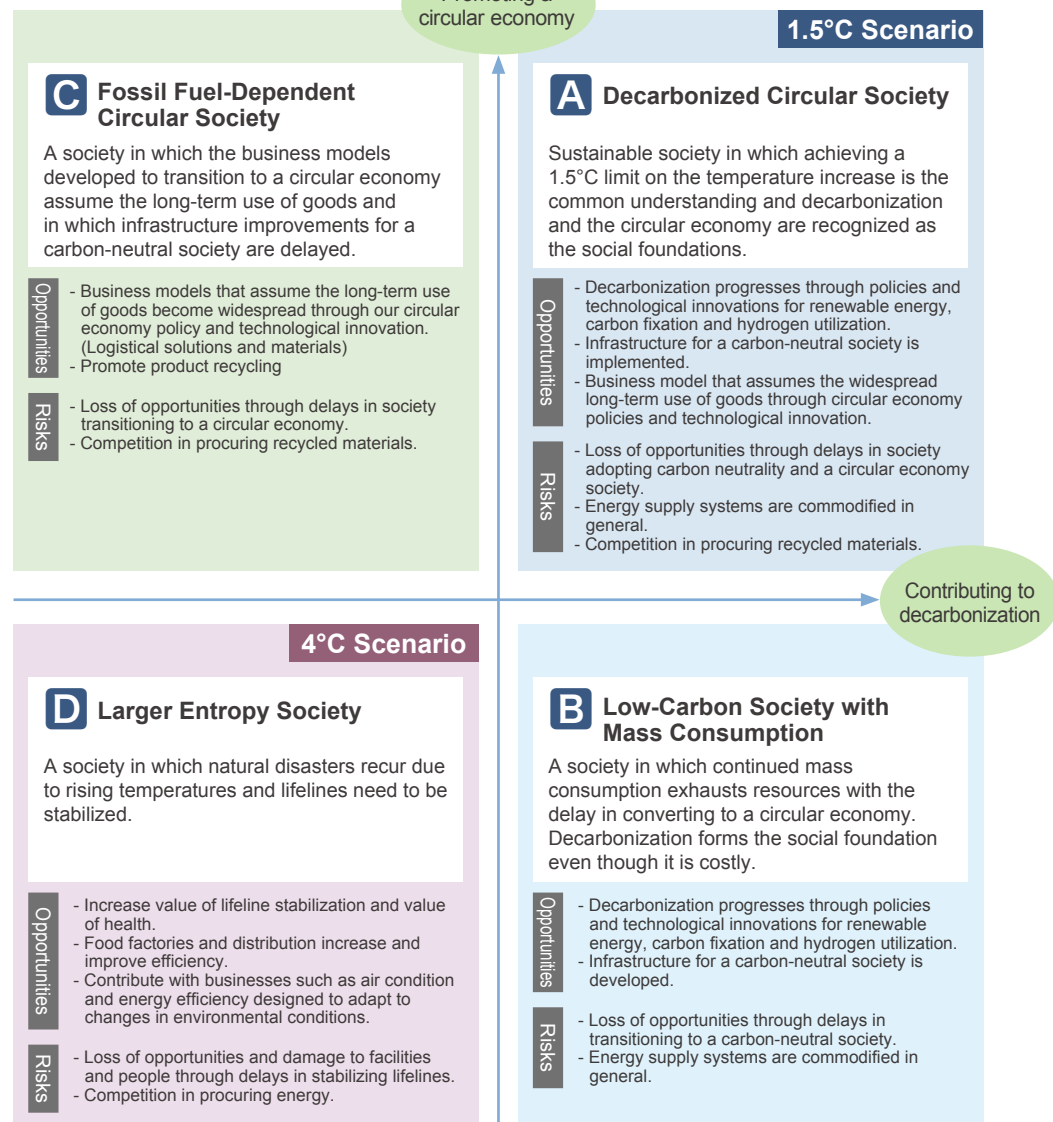
Figure 1 Analyzing the Impact of Climate Change Risks

Risk categories related to climate change	Transitional risks			
	Markets			● Promoting a circular economy
	Policies/laws and regulations		• Acceleration of carbon pricing	• Progressive shift to electric vehicles
	Technologies	• Expansion of carbon-free power generation	• Expansion of renewable energy usage • Replacement with low-carbon products • Streamlining of supply chain	• Spread of ZEH/ZEB
	Reputation		• Rise of environmental awareness among consumers • Increase of reputational risks	
	Physical risks			
Acute		• Physical risk management related to climate change		
Chronic	• Constant temperature rise			
		Strong	Impact on our businesses	Extremely strong

● Contributing to decarbonization

From a climate change viewpoint, we identified “Promoting a circular economy” and “Contributing to decarbonization” and their materiality as factors that have a very significant impact on our business. With these two factors as the axes of a matrix, we created four scenarios for 2050 in the following quadrants (Figure 2). We defined the 1.5°C scenario as a society which contributes to decarbonization and promotes a circular economy, and the 4°C scenario as a society in which the contributing to decarbonization is stalled and implementation of a circular economy is delayed.

Figure 2 Four Scenarios



The Decarbonized Circular Society **A** is equivalent to the 1.5°C scenario. If **A** doesn't develop a circular economy, it becomes **B** a Low-Carbon Society with Mass Consumption. If **A** doesn't develop decarbonization, it becomes **C** a Fossil Fuel-Dependent Circular Society. Scenario **D** a Larger Entropy Society, is equivalent to the 4°C scenario.

Fuller descriptions of each set of social conditions are given below.

A Decarbonized Circular Society

● Impact on industries

Concurrent progress of legislation and technological innovation related to contributing to decarbonization and creating a circular economy help to form a related infrastructure for a carbon-neutral society and Circular Economy. This encourages investment in decarbonization in automotive and real estate industries, and advances the shift to business models that assume long-term use of goods in industries involved in the supply chain. It is also expected that not only products but also the construction of sustainable towns designed for carbon neutrality and Circular Economy will attract investment.

● Changes in customer value

Consumers: Eco-consciousness, cost reduction, ethical, on-demand usage, etc.

Corporations: Eco-consciousness, cost reduction (energy saving, asset-light approach, better fuel efficiency, etc.), effect and efficiency enhancement (maximization of customer value, i.e. better experience value, etc.), sufficient information disclosure

B Low-Carbon Society with Mass Consumption

● Impact on industries

Progress of carbon-related legislation (NEV/ZEV laws and ZEH/ZEB subsidy policies, etc.) and technological innovation (reduced cost of renewable energy and storage batteries, etc.) encourages standardization for decarbonization in the automotive and real estate industries and attracts investment. This helps the shift to electrification and a renewable energy infrastructure.

Adoption of renewable energy and hydrogen also expands.

● Changes in customer value

Consumers: Eco-consciousness, cost reduction (energy saving, better fuel efficiency, etc.).

Corporations: Eco-consciousness, energy saving and better fuel efficiency (downsizing, weight reduction, high density and capacity, high efficiency, etc.).

C Fossil Fuel-Dependent Circular Society

● Impact on industries

Progress in technological innovation of waste plastic and for a circular economy (data linkage, material recycling, etc.) and their related legislation eliminate waste in the supply chain and encourage a shift to a circular economy. Corporations involved in the supply chain (manufacturers, distributors, etc.) change their business models from sales and consumption-based models to those that assume long-term usage of goods, including leasing, sharing, and repair. Products made of recycled resources become mainstream backed up by the formation of waste collection networks and material recycling systems.

● Changes in customer value

Consumers: Eco-consciousness, ethical, on-demand usage, etc.

Corporations: Effect and efficiency enhancement (maximization of customer value, i.e. better experience value, etc.), cost reduction (energy saving, asset-light approach, etc.).

D Larger Entropy Society

● Impact on industries

Changes in rainfall amounts and patterns make it difficult to control the yield and quality of agricultural products. This encourages a shift to demand and supply matching consumption, which eliminates waste in distribution. Deterioration of living and working environment and increases in illness due to constant temperature rises expand demand for companies related to indoor environments and health (building, home appliances, healthcare, etc.). In response to the increase in natural disasters, investment in infrastructure resilience to maintain the supply chain will increase.

● Changes in customer value

Consumers: Lifeline stabilization and resilience enhancement, health.

Corporations: Productivity enhancement, demand and supply matching, supply chain resilience.

We can address the risks and opportunities corresponding to the above scenarios through any of our six main operating companies shown below.

1. Panasonic Corporation
(Home appliance business, Air quality and air conditioning business, Food distribution business, Smart Energy System business, Electrical facility materials business)
2. Panasonic Connect Co., Ltd.
3. Panasonic Energy Co., Ltd.
4. Panasonic Industry Co., Ltd.
5. Panasonic Entertainment & Communication Co., Ltd.
6. Panasonic Housing Solutions Co., Ltd.

For each type of society, we have formulated strategies for our six operating companies from the viewpoint of climate change. Some of the strategies are listed below, with the applicable society type indicated by the corresponding scenario from **A** to **D**.

The total sales of the operating companies for fiscal 2025 are shown as financial information.

1. Panasonic Corporation

Sales for fiscal 2025: 3,584.2 billion yen

1-1 Living Appliances and Solutions Company

- Build a circular value chain with customers through products and services. **A B C**
- Achieve extension of the product life cycle and improve customer engagement looking ahead of circular economy. **A C**

1-2 Heating & Ventilation A/C Company

- Provide the optimum and highest air and water quality values with low environmental impact, not found in conventional air conditioning, with a combination of our unique air and water technologies. **A B C D**
- Create unprecedented value with water and air heating systems with heat pump (A2W), chillers, and combination of air quality and air conditioning in the air conditioning business of water circulation type to contribute to improvement for decarbonization and air quality values. **A B C D**

1-3 Cold Chain Solutions Company

- Promote energy conservation offering comprehensive support for our energy monitoring system covering from system installation to operations and maintenance. Our equipment refurbishing service prolongs system usage while contributing to a circular economy. **A B C**
- Accelerate development of natural refrigerants with lower environmental impact through wider use of CO₂ refrigeration equipment. **A B**

1-4 Electric Works Company

- Provide a sustainable and safe and secure facility infrastructure based on our wiring fixtures to contribute to electrification and disaster-resilient society with zero environmental impact in the world. **A B C D**

1-5 Direct Control (Hydrogen Related Businesses)

- Achieve local production for local consumption of energy by developing a decentralized energy package business utilizing hydrogen. **A B D**

2. Panasonic Connect Co., Ltd.

Sales for fiscal 2025: 1,333.2 billion yen

- Reduce waste energy and waste goods by supply chain orchestration, including streamlining corporate customers' logistics and responsive tuning of demand and supply. **A B**
- Offer solutions to improve energy efficiency and automation at corporate customers. **A B**

3. Panasonic Industry Co., Ltd.

Sales for fiscal 2025: 1,083.6 billion yen

- Develop and supply products that contribute to reducing power consumption in the information and telecommunications infrastructure, where energy consumption is increasing due to the growing demand for AI. **A B**
- Develop and supply products that contribute to electrification of vehicles and improvements in power and fuel economy. **A B**
- Reduce environmental impact through development and provision of products that contribute to product/equipment downsizing, light weight, low energy loss, and longer product life. **A B C**
- Reduce CO₂ emissions by conserving energy and wider use of renewable energy in manufacturing activities. **A B**

4. Panasonic Energy Co., Ltd.

Sales for fiscal 2025: 873.2 billion yen

- Increase avoided CO₂ emissions, by increasing the number of electric vehicle users through increasing the capacity of automotive batteries, enhancing our production capacity and introducing battery solutions such as using storage systems to reduce the electrical load at data centers. **A B C**
- Halve the carbon footprint in fiscal 2031 over the fiscal 2022 level by building Net Zero Factories, procuring lithium ion battery materials locally and establishing circular economy business models. **A B C**

5. Panasonic Entertainment & Communication Co., Ltd.

Sales for fiscal 2025: 278.0 billion yen

- Reduce CO₂ emissions by introducing renewable energy at our own sites, establishing a factory energy management system, giving buildings heat shielding coatings and by saving energy per product category. **A B**
- Promote circular economy through enhancement of refurbishing businesses, acceleration for using recycled resin, adoption of eco packaging, and the like. **A C**

6. Panasonic Housing Solutions Co., Ltd.

Sales for fiscal 2025: 479.5 billion yen

- Reduce CO₂ emissions in our value chain by comprehensive implementation of energy-saving initiatives and electrical power generation. **A B**
- Enhance our range of products and solutions that contribute to reducing CO₂ emissions in society. **A B**
- Promote a circular economy to expand the use of recycled and sustainable materials and reduce resource use. **A C**

The scenario analysis found that either of the businesses in our group can respond to the situation even if any of the 4 scenarios of the societies is achieved. In other words, the analysis successfully verified the resilience of our business strategies. The analysis also helped us understand that we can contribute to building a sustainable society through our businesses. We continue our efforts to build the 1.5°C world, represented by our society **A**.

Response to TNFD

TNFD Recommendations*¹

In the same way as the TCFD recommendations, the TNFD recommendations comprise the four thematic areas of Governance, Strategy, Risk and Impact Management, and Indices and Targets, for corporations to voluntarily identify and disclose business risks and opportunities.

The Panasonic Group recognizes risks and opportunities concerning natural capital as a critical management issue. Based on the TNFD recommendations, we are currently identifying these business risks and opportunities, as well as verifying the resilience of our business strategies. We are also assessing business sustainability using scenario analysis.

*¹ In September 2023, the Taskforce on Nature-related Financial Disclosures (TNFD) released a set of disclosure recommendations and guidance for organizations to report and act on evolving nature-related dependencies, impacts, risks, and opportunities.

General Requirements

(1) The approach to materiality

This report assesses and describes “impacts from natural capital on our business activities” and “impacts from our business activities on natural capital” applying a dual materiality approach.

(2) The scope of disclosures

This report adheres to the four pillars of the disclosure recommendations, which are Governance, Strategy, Risk & Impact Management, and Metrics & Targets. The scope of the analysis covers the Panasonic Group’s business activities and those of the upstream and downstream of the supply chains. The analysis includes nature-related impact from all manufacturing sites across the group, and then the business-related dependencies and impacts were analyzed under the electronics sector. The risks and opportunities were identified using the LEAP approach,^{*2} recommended by TNFD, and scenario analysis.

(3) The location specificity of nature-related issues

The analysis used data from the areas where we operate.

(4) Integration with other sustainability-related disclosures

The analysis took into account the relation to environmental issues, such as climate change and resource recycling.

(5) Time span

We use three time spans: Short term—up to three years into the future; Medium term—up to 2030; and Long term—up to 2050.

(6) Stakeholder engagement

We hold dialogues with major media outlets coinciding with the publication of annual sustainability data books. We also hold regular meetings between external experts and our

management to deepen understanding of natural capital and gain objective perspectives on the Panasonic Group’s efforts.

We are closely engaged with institutional investors to discuss the sustainability strategy that helps to increase our medium- to long-term corporate value. Every company inevitably causes direct and indirect impacts from its business operations. The direct impact is to the company’s operating area and surrounding areas, and the indirect impact is to all stakeholders affected by the direct impact. We are watchful for human rights infringements occurring from these direct and indirect impacts and are aware of the importance of managing and correcting any infringements. The Panasonic Group endorses all human rights-related international rules and models, and values the human rights of anyone who may be affected by our business activities. We put the greatest emphasis on our efforts to fulfill this responsibility. We are keen to understand the status of impact from our businesses on indigenous peoples, local communities, and other stakeholders, and are reinforcing our system to protect their human rights. Please refer to the following section, Governance, for more details.

*² LEAP approach

TNFD adopted the LEAP approach to comprehensively assess nature-related risks and opportunities.

The LEAP approach comprises four phases: Locate the company’s interfaces with nature; Evaluate its dependencies and impacts on nature; Assess its nature-related risks and opportunities; and Prepare and report on material nature-related issues.

Governance

Aiming to build a sustainable society, the Panasonic Group regards issues relating to natural capital—such as biodiversity—as a critical management issue. We manage such issues under groupwide governance using the same system and schemes as we do for TCFD (see [page 29](#)). We are working to build a society in harmony with nature, contributing to a nature-positive future by supporting the recovery of natural ecosystems. As a part of this effort, we value the human rights of any stakeholders who could be affected indirectly by nature altered by our businesses and supply chain—especially those who are vulnerable to environmental deterioration, such as indigenous peoples and local communities. Such stakeholders have the right to obtain accurate and appropriate information, the right to effectively participate in decision making concerning their environment (including the right of self-determination and to prevent forced relocation of indigenous peoples and local communities), and the right to receive effective remedies. We understand the importance of such rights, as well as of engagement with them to support and exercise their rights. We are aiming to enhance our capability to address these issues.

Strategy

The Panasonic Group provides products and solutions that contribute to people’s lives and businesses. Such products and services include home appliances, housing facilities, devices and systems for production and distribution sites, and batteries and electronic components that

support transportation systems and social infrastructure. Our businesses largely depend on natural capital, such as water and mineral resources, and biodiversity.

Business management that can bring both business results and natural capital protection is essential to maintaining a sustainable business. With full awareness of this point, we are working to identify and assess nature-related risks in our value chain.

In 2024, we qualitatively evaluated our businesses' relationships with nature and prioritized any issues using the ENCORE³ and LEAP approaches. The scope of

this assessment covered general product life cycles, including procurement, production, usage, and disposal. The production phase was then analyzed according to the Group companies—Living Appliances and Solutions, Connect, Industry, Energy, and others. Subsequently, these analyses were studied according to the characteristics of major products. We plan to build a more precise assessment system by continuing detailed analysis and improving the assessment procedure.

³ ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure. A tool developed by the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) to

systematically visualize how businesses impact and depend on natural capital, enabling companies to be aware of their exposure to nature through business operations and material procurement in the supply chain. The tool is recommended by the TNFD Guidance and the Ministry of the Environment.

■ Dependency Heatmapping

We created a heatmap that shows our value chain's dependencies on ecosystem services, categorized into Very High, High, Medium, and Low (including Very Low and N/A). As a result of ENCORE scoring, many of our business segments showed high dependency on water resources, both surface and underground water.

Ecosystem service dependency heatmap

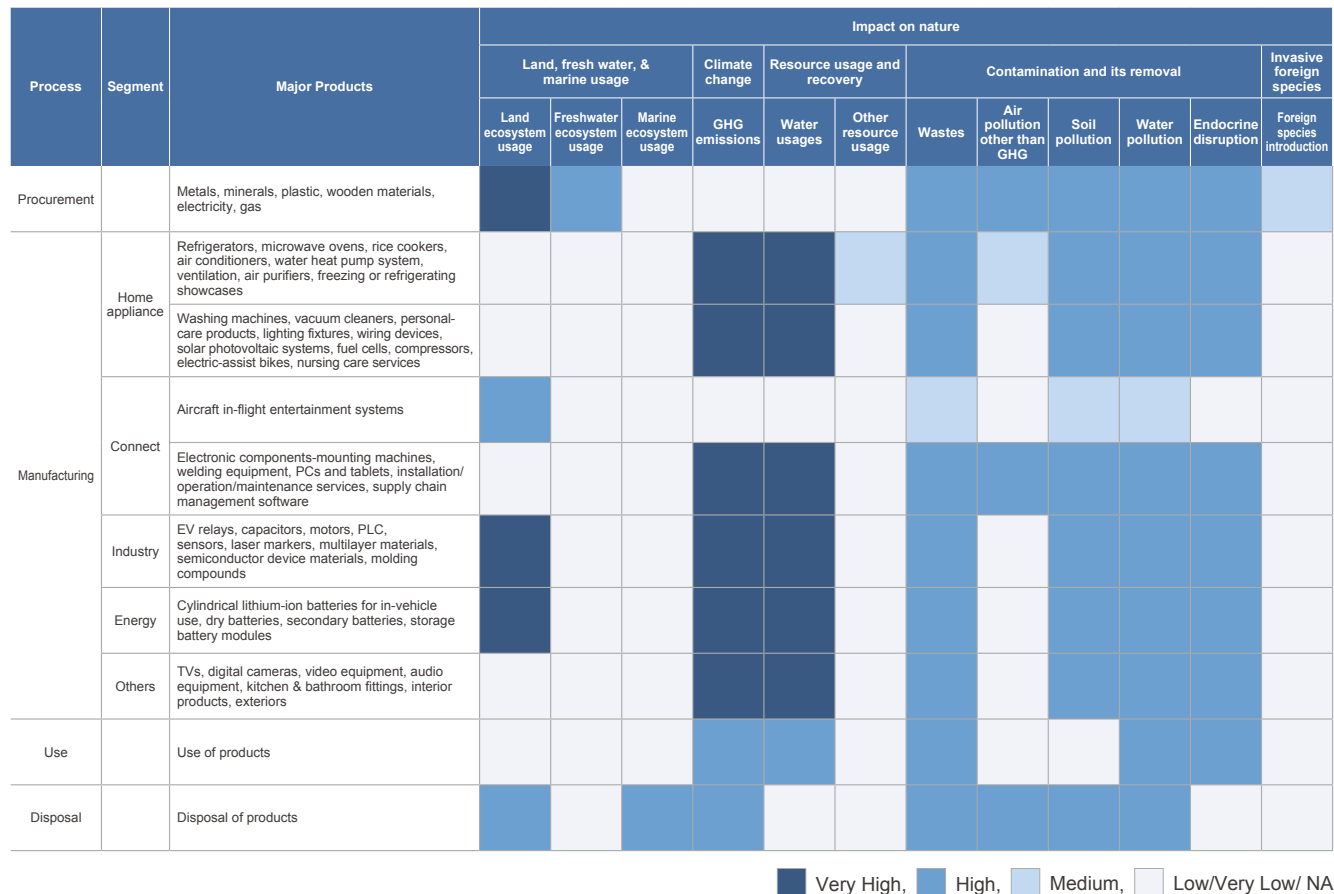
Process	Segment	Major Products	Provisioning services					Regulating & maintenance services														Cultural services						
			Water resources		Other resources			Purification					Waterflow regulation	Climate regulation	Flooding and storm mitigation	Soil retention and quality maintenance			Other regulations									
			Surface water	Underground water	Others	Gene Resources	Animal energy	Environment recovery	Filtering and sedimentation	Atmospheric dilution	Indoor ventilation	Water quality	Sensory nuisances		Water circulation maintenance	Flooding and storm protection	Buffering and attenuation of mass flows	Erosion prevention	Soil quality maintenance	Pollination	Habitat maintenance		Pest control	Disease control				
Procurement		Metals, minerals, plastic, wooden materials, electricity, gas	High	High											Very High	High												
Manufacturing	Home appliance	Refrigerators, microwave ovens, rice cookers, air conditioners, water heat pump system, ventilation, air purifiers, freezing or refrigerating showcases	High	High																								
		Washing machines, vacuum cleaners, personal-care products, lighting fixtures, wiring devices, solar photovoltaic systems, fuel cells, compressors, electric-assist bikes, nursing care services	High	High																								
	Connect	Aircraft in-flight entertainment systems														High	High											
		Electronic components-mounting machines, welding equipment, PCs and tablets, installation/operation/maintenance services, supply chain management software	High	High																								
	Industry	EV relays, capacitors, motors, PLC, sensors, laser markers, multilayer materials, semiconductor device materials, molding compounds	Very High	Very High				High	High																			
		Cylindrical lithium-ion batteries for in-vehicle use, dry batteries, secondary batteries, storage battery modules	Very High	Very High				High	High																			
Others	TVs, digital cameras, video equipment, audio equipment, kitchen & bathroom fittings, interior products, exteriors	High	High																									
	Use of products	High	High																									
Disposal		Disposal of products	High	High																								

Very High, High, Medium, Low/Very Low/ NA

Impact Heatmapping

We have also created a heatmap of impacts from our businesses using four categories of Very High, High, Medium and Low (including Very Low and N/A). As a result, many of our business segments showed a high impact for GHG emissions, water usage, land ecosystem usage, waste emissions, soil pollution, and water pollution.

Ecosystem service impact heatmap



Locating Nature Priority Sites (Locate)

Among all the Panasonic Group's manufacturing sites, we identified Sensitive Locations as defined by TNFD. Combining the analysis tools and database referred to by TNFD, we identified Sensitive Locations according to the score for each manufacturing site calculated for the following areas: Areas Important for Biodiversity; Areas of High Ecological Integrity; Areas Important for Ecosystem Services Provision; and Areas of Physical Risks for Water. As for the physical risks for water, 54% of our entire sites were found to be in sensitive locations. Taking account of the importance of our group businesses, we will continue to identify the Priority Locations as defined by TNFD.

Sensitive locations among all manufacturing sites

Criteria for sensitive locations	Tools	Index	Specific criteria	Summary of results
Criteria for sensitive locations	IBAT	1. WDPA, 2. KBA, 3. Rarity-weighted species richness	Evaluated according to World Database on Protected Areas (WDPAs), Key Biodiversity Areas (KBAs), and Species Diversity Indices	- 8% of all manufacturing sites are in sensitive locations - Including sites in Malaysia, Taiwan, and Singapore
High ecological integrity	1. Newbold, 2. Global Forest Watch	1. Biodiversity intactness index, 2. Tree cover loss	Evaluated for Biodiversity Intactness Index, and Green Cover Depletion	- 13% of all manufacturing sites are in sensitive locations - Including sites in Malaysia, Thailand, and Japan
Important for Ecosystem Services Provision	Land Mark	Land of indigenous peoples and local communities	Evaluated for proximity to land of indigenous peoples and local communities	- 6% of all manufacturing sites are in sensitive locations - Includes sites in India, Mexico, Vietnam, and America
Physical Risks for Water	1. Aqueduct, 2. WRF, 3. Flood risk finder	1. Baseline water stress, 2. Surface water quality index, 3. Flooding depth	Evaluated for water stress, quality of surface water, flooding depth, etc.	- 54% of all manufacturing sites are in sensitive locations - Many sites face water pollution risks. China showed the highest number with 32 sites.

The Locate phase for water resources is described on page 73. The qualitative analysis of the impact on the ecosystem from iron resources is currently being undertaken (for details, see https://holdings.panasonic/global/corporate/sustainability/environment/resources/recycling_oriented_manufacturing.html#iron)

Identifying Risks and Opportunities Based on Scenario Analysis

Identifying Risks and Opportunities

The Panasonic Group is aware of the impact and dependencies of our business activities on natural capital (ecosystem services), and regards our response to related risks and opportunities as priority issues in business management. As a part of such efforts, we ran scenario analyses based on the TNFD recommendations to identify nature-related risks and opportunities. With our eyes set on 2050, we analyzed four scenarios (phases) formed on the two axes of “ecosystem service degradation” and “alignment of market and non-market forces,” as recommended by TNFD. As a result, we adopted the following two scenarios for detailed analysis based on their perceived likelihood and potential scale of impact.

- Nature Positive (NP) Scenario

This scenario assumes vigorous progress in nature protection and recovery whereby natural capital would be recovered in the future. This is a scenario based on Vision 2050 of the Kunming-Montreal Global Biodiversity Framework (GBF), which aims at a world living in harmony with nature, or equivalent to a +1.5°C climate change scenario.

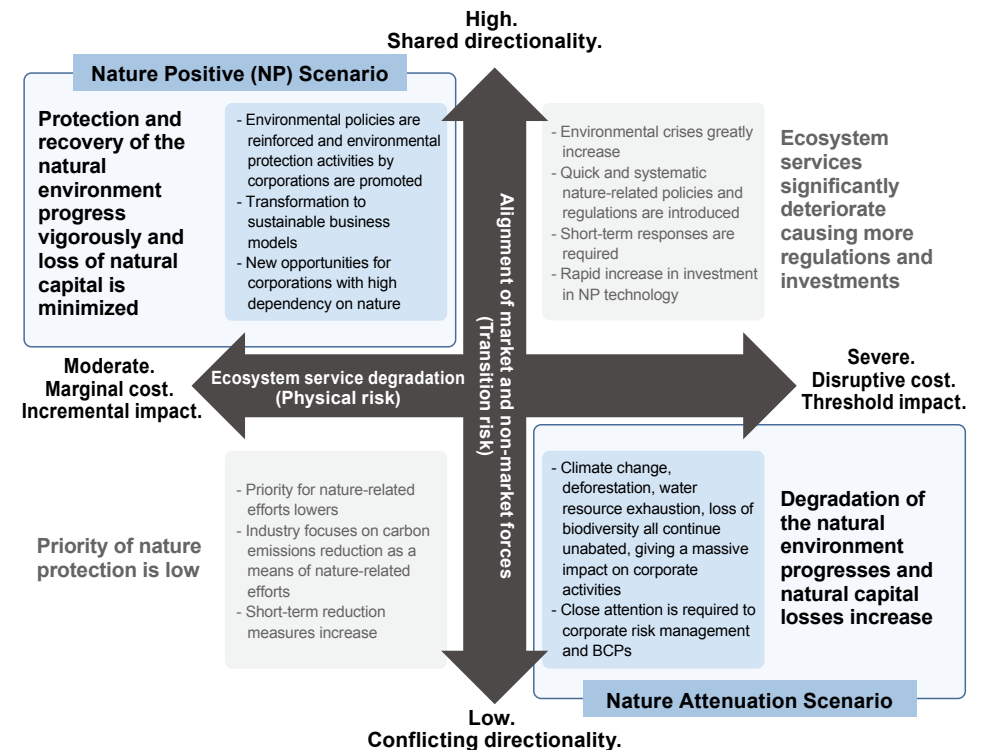
- Nature Attenuation Scenario

This scenario assumes a world where natural capital and biodiversity are largely lost due to lack of international cooperation towards nature positive. This is equivalent to a +4°C climate change

scenario that describes the accelerated degradation of the natural environment.

Based on these two scenarios, we identified potential issues in the upstream, direct operations, and downstream of the value chain, as well as in the business areas of each operating company. We then assumed the impact from such issues (risks and opportunities) on our finances and businesses. Taking account of the scale of the impacts and their possible frequency, as well as their time span, we made a relative evaluation between the risks and opportunities. Based on the evaluation results, we then devised countermeasures to minimize the risks and maximize the opportunities. These countermeasures were developed from the standpoint of measures already enforced, other measures currently being discussed, and future plans.

Four Scenarios and Assumed Worlds



Scenario Analysis on the Value Chain Upstream

Upstream analysis identified issues related to material procurement, which has a close relationship with nature. In the Nature Positive scenario, where nature protection and recovery progress vigorously, mandatory usage of materials with low environmental impact and tighter material usage restrictions may be enforced. These changes may cause instabilities in material

procurement, stricter pursuit of illegal procurement, lowering of business value due to increase in lawsuit and compensation risks, and damage to our brand image. While in the Nature Attenuation scenario, where nature degradation and social indifference progress, we assume risks such as unstable material procurement due to intensified natural disasters and flooding arise with the lowering natural power of climate regulation and water retention. To respond to such risks, we would need to disperse the upstream sites over different areas, keeping pace with the latest regulation changes, and requiring closer cooperation with suppliers.

Risks, opportunities, and countermeasures (upstream)

Scenario	Possible issues	Risks and opportunities		Risk assessment and opportunity assessment	Time span	Risk countermeasures
NP	Mandatory usage of materials with low environmental impact. Tighter usage restrictions of specific hazardous chemicals and materials.	Risks	Growing instability and difficulties in resource and material procurement.	Medium to large	Short- to mid-term	Distributed procurement from appropriately dispersed suppliers across value chain upstream sites.
		Opportunities	Securing business competence through development of technologies related to procuring materials with low environmental impact.			Offering products and services with low environmental impact through visualization of procurement (monitoring and database DX).
NP	Stricter pursuit of procurement legality. Increase of lawsuits and compensation demands.	Risks	Lowered business value and damage to brand image.	Medium to large	Mid- to long-term	Requesting suppliers to ensure legal material procurement. Replacing product materials with recycled materials.
		Opportunities	Improving reputation and brand image by adopting materials with low environmental impact.			Following the latest global trends, adopting self-regulation stricter than legal requirements. Establishing internal standards and regular revision. Introducing checkup and inspection system.
Nature Attenuation	Intensified natural disasters and flooding due to lowered natural power of climate regulation and water retention.	Risks	Growing instability and difficulty of resource and material procurement. Increasing cost of recovery, repairs, and operations.	Medium to large	Short- to long-term	Distributed procurement from appropriately dispersed suppliers across value chain upstream sites.
		Opportunities	Disaster countermeasures in the value chain upstream sites. Facility investment for more efficient operations.			Offering (energy-saving) products with less CO ₂ emissions and/or less water usage, and circular services.

■ Scenario Analysis of Direct Operations in the Value Chain

Direct operation analyses revealed that there are many issues in manufacturing, where natural materials are used. In the Nature Positive scenario, mandatory usage of materials with low environmental impact and tighter material usage restrictions may be enforced. These changes may cause risks, such as business stagnation and suspension. At the same time, increased demands for products and services with low environmental impact would require us to operate our business to suit such demands and publicly announce our contribution to ecosystems. Also, we would need to convert our business models to recycling-oriented, by creating products and services that provide a positive impact on nature and ecosystems, collecting and recycling used

products, and expanding refurbished products. To realize this, we are aware of the necessity of strategic and well-planned resource deployment; facility investment; and development of eco-conscious product design and manufacturing technologies, as well as resource extraction technologies within the recycling process. In the Nature Attenuation scenario, we are concerned about the growing instability of material procurement and business operations due to the increase in natural disasters and flooding caused by deterioration in nature's capability with respect to climate regulation and water retention.

Risks, opportunities, and countermeasures (direct operations)

Scenario	Possible issues	Risks and opportunities		Risk assessment and opportunity assessment	Time span	Risk countermeasures
NP Nature Attenuation	Providing products and services with positive impact on nature and ecosystems. Collecting and recycling used products. Reviewing refurbishment-based business models.	Risks	Delays, suspensions, and stoppages concerning research, development, production, services, and sales.	Medium to large	Short- to mid-term	Following the latest global trends, strategically training people for risk reduction and accident prevention, and making well-planned facility investments.
		Opportunities	Developing and commercializing low environmental impact technologies.			Developing eco-conscious materials. Solutions to visualize ecosystem protection and recovery. Developing recycling-oriented product design and manufacturing technologies, and resource extraction technologies for recycling.
NP	Mandatory usage of materials with low environmental impact. Tighter usage restrictions of specific hazardous chemicals and materials.	Risks	Production difficulties and increased costs due to restrictions on materials with high environmental impact.	Medium to large	Mid- to long-term	Reforming business processes to reduce resource usage, DX, more efficient operations using AI, and cost reduction.
		Opportunities	Developing products and services with low environmental impact throughout their life cycles.			Developing eco-conscious materials. Solutions to visualize ecosystem protection and recovery. Developing recycling-oriented product design and manufacturing technologies, and resource extraction technologies for recycling.
NP	Diversified customer preferences concerning products and services with low environmental impact. Intensified natural disasters and flooding due to lowered natural power of climate regulation and water retention.	Risks	Lowered brand image and trust due to insufficient efforts on ecosystem. Worsened relationships with stakeholders.	Medium	Short- to mid-term	Providing products and services that support and contribute to the ecosystem. Publicly announcing information about this approach. Acting on ecosystem protection and recovery in direct operation sites in the value chain (from procurement to sales).
		Opportunities	Disaster countermeasures in production, distribution, and sales sites. Facility investment for efficient operations.			Moving operation sites from a global viewpoint, such as natural disaster occurrence frequency and resource usage regulations. Dispersed deployment of appropriate sites related to value chains (production, distribution, sales, and maintenance).
Nature Attenuation	Intensified natural disasters and flooding due to lowered natural power of climate regulation and water retention.	Risks	Delays, suspensions, and stoppages concerning research, development, production, services, and sales.	Medium to large	Short- to long-term	Offering (energy-saving) products with less CO ₂ emissions and/or less water usage, and circular services.
		Opportunities	Disaster countermeasures in production, distribution, and sales sites. Facility investment for efficient operations.			Offering (energy-saving) products with less CO ₂ emissions and/or less water usage, and circular services.

■ Scenario Analysis in the Value Chain Downstream

The downstream analysis identified a number of risks related to collection and recycling of used products, and refurbishing. In the Nature Positive scenario, we assumed that a circular economy and recycling-related regulations would be reinforced. We would need to develop and introduce recycling-oriented product design and manufacturing technologies, along with resource extraction technologies. We would also need to establish a system to measure and assess the quantity of used materials and generated wastes in each process of a product life cycle. It would also be necessary to build a closer relationship among partner corporations (joint development and testing, service provision, and forming new partnerships), as well as developing solution technologies to visualize ecosystem protection and recovery.

In the Nature Attenuation scenario, the electronic device and battery business, which uses rare mineral resources as a major material, would face challenges concerning how we can achieve ecosystem protection and a successful business at the same time. For this reason, it is essential to keep pace with the latest regulation trends, establish and maintain internal standards stricter than the legal requirements, and establish a system to carry out regular checkups and inspections. Further, it is important to publicly announce such efforts and results in an appropriate manner.

Risks, opportunities, and countermeasures (downstream)

Scenario	Possible issues	Risks and opportunities		Risk assessment and opportunity assessment	Time span	Risk countermeasures
NP Nature Attenuation	Collecting and recycling used products. Revising business models to allow refurbishing.	Risks	Increase in design costs (materials and disassembly). Value chain reform costs.	Medium to large	Short- to mid-term	Promoting corporate collaboration: joint development and testing, service provision, partnerships, and corporate ecosystems.
		Opportunities	Developing and commercializing low environmental impact technologies.			Developing eco-conscious materials. Solutions to visualize ecosystem protection and recovery. Developing recycling-oriented product design and manufacturing technologies, and resource extraction technologies for recycling.
NP	Increased and reinforced natural capital-related (recycling) regulations.	Risks	Complications and cost increase in product development in order to be compliant with reinforced regulations.	Medium to large	Mid- to long-term	Achieving better product development efficiency and cost reduction by developing and introducing recycling-oriented design, manufacturing, and resource separation technologies.
		Opportunities	Developing products and services with low environmental impact throughout their life cycles.			Establishing systems to measure and assess quantity of used materials and generated wastes in each process of the product life cycle.
Nature Attenuation	Achieving a successful business and ecosystem protection in the electronic device and battery business, which uses rare mineral resources as a major material.	Risks	Risks of reputational damage, lawsuits, and boycotts, due to using materials with high ecosystem destruction risks or little consideration given to environmental or human rights due diligence.	Medium to large	Mid- to long-term	Following the latest global trends, adopting self-regulation stricter than the legal requirements. Establishing internal standards and regular revision. Introducing a checkup and inspection system.
		Opportunities	Announcing our environmental impact reduction through collecting, recycling, and refurbishing used products.			Appropriately announcing that our products and services support and contribute to ecosystems.

Risk and Impact Management

The Panasonic Group regards issues related to natural capital, including biodiversity, as a critical management issue, just as we do for climate change issues. We are working to alleviate impacts from identified risks and enhance opportunities by integrating them within the groupwide risk management system, as we do for TCFD (see [page 75](#)).

Metrics and Targets

Under Panasonic GREEN IMPACT, our long-term environmental vision, the Panasonic Group has set out targets that aim to reduce risks and expand opportunities related to natural capital protection (resource-related numerical targets and qualitative goals concerning biodiversity and water). We are working hard to achieve these targets and goals to reduce environmental impact across our value chain (see [page 16](#)). We will continue our efforts leading to natural capital protection through our global environmental activities and by setting new indices and targets in our business activities.

Climate Change Materiality

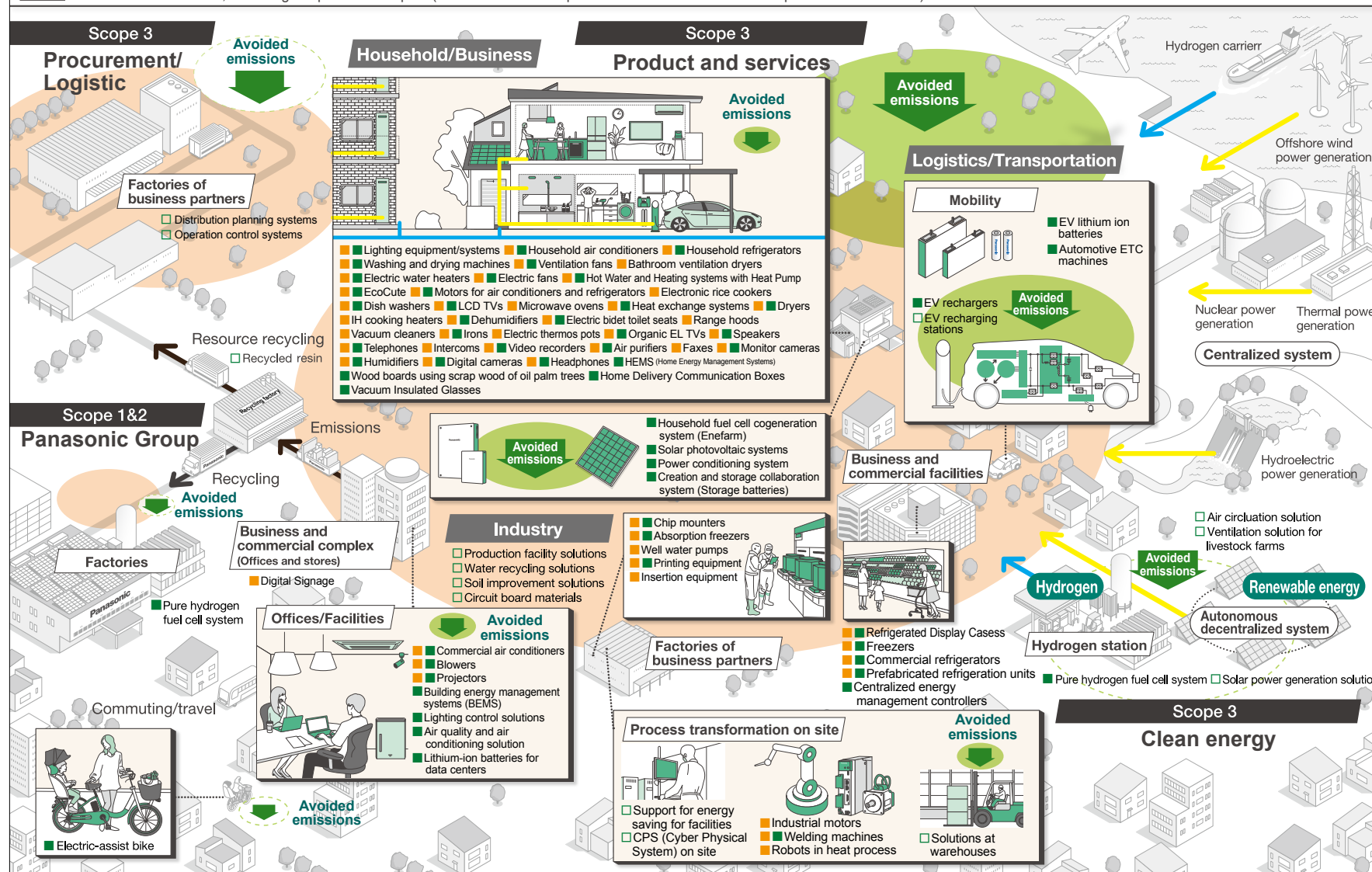
Our Businesses' Contribution to Carbon Neutrality

(From FY2025 business results)

● Amount of GHG emissions
● Reduced amount (Estimates indicated by ♻️)
■ Products with emissions
■ Products with avoided CO₂ emissions (Estimates indicated by ♻️)
□ The products with avoided CO₂ emissions that are not included in the total
→ Flow of electricity
→ Flow of hydrogen
→ Flow of emitted recyclables

* The size of circle indicates size of GHG emissions amount.
 * The amount of GHG emissions and reduced amount were calculated from the energy usage amount.

Scope 1 Panasonic Group's direct emissions of GHGs (Fuel combustion and industrial processes). **Scope 2** Panasonic Group's indirect emissions from using electricity, heat, and steam provided by third parties.
Scope 3 Other indirect emissions, excluding Scope 1 and Scope 2 (emissions from third parties involved in Panasonic Group's business activities).



* The number of businesses with emissions or avoided emissions does not match with the number stated in "the GREEN IMPACT PLAN 2024" on pages 16-18 because of sub categorization for calculation in businesses such as those for heat exchange systems, electric fans, microwave ovens, and display cases.

Reducing CO₂ Emissions in Factories

Reducing the Amount of Energy Used and CO₂ Emissions in Business Activities

To achieve Panasonic GREEN IMPACT, Panasonic Group has been working on toward making net zero factories^{*1} by promoting our efforts internally and externally to realize net zero CO₂ emissions at own sites in all our operating companies by 2030.^{*2}

For this medium term, we established the GREEN IMPACT PLAN 2024. As our efforts for OWN IMPACT Scope 1 and 2, we have increased the number of net zero factories to 37, aiming to reduce 260,000 tons of CO₂ emissions. In the Net Zero Factory Promotion Taskforce we started up in September 2021. The taskforce aims to create and provide Group-wide measures to accelerate the creation of net zero factories. The Taskforce consists of the Energy Saving Working Group (WG) that promotes a range of energy-saving measures, the Renewable Energy Utilization WG that assess the usage expansion of renewable energy in each site, and the Renewable Energy Procurement WG that promotes the procurement of renewable energy. With the participation of related sectors, our manufacturing, procurement, and environment specialists work together to support the united efforts of all operating companies. During this fiscal year, we held seminars to introduce internal excellent examples and the latest information on energy saving and energy recycling to Group members. We also hold study session by region outside Japan.

We also participate in the Keidanren Carbon Neutrality Action Plan, a voluntary action plan to alleviate global warming promoted by the entire electric and electronics industry. The industry set a target of an "average 1% improvement in energy intensity in factories and large offices per year towards 2030" and we are now working steadily to save more energy in factories and offices.

^{*1} The Panasonic Group's net zero factories mean realization of net zero CO₂ emissions from factory production across the world. This will be attained by promoting our conventional energy saving activities (e.g. using LED lighting), advanced energy saving technologies, such as Factory Energy Management System (FEMS), productivity improvement, and innovative manufacturing. Other means include a combination of the following efforts: promoting renewable energy usage, such as by adopting photovoltaic power systems, energy storage modules, and hydrogen fuel cells; procuring 100% renewable energy-sourced electricity; and obtaining environmental values (energy certificates and carbon credits). The Panasonic Group publishes, both internally and externally, our accelerating efforts towards reaching our goal of net zero CO₂ emissions in all the operating companies' sites by 2030.

^{*2} Panasonic's direction: To become a top runner in the fields of "environment" and "high usability in business."

☞ <https://news.panasonic.com/global/stories/2021/90376.html>

■ Increasing the number of net zero factories

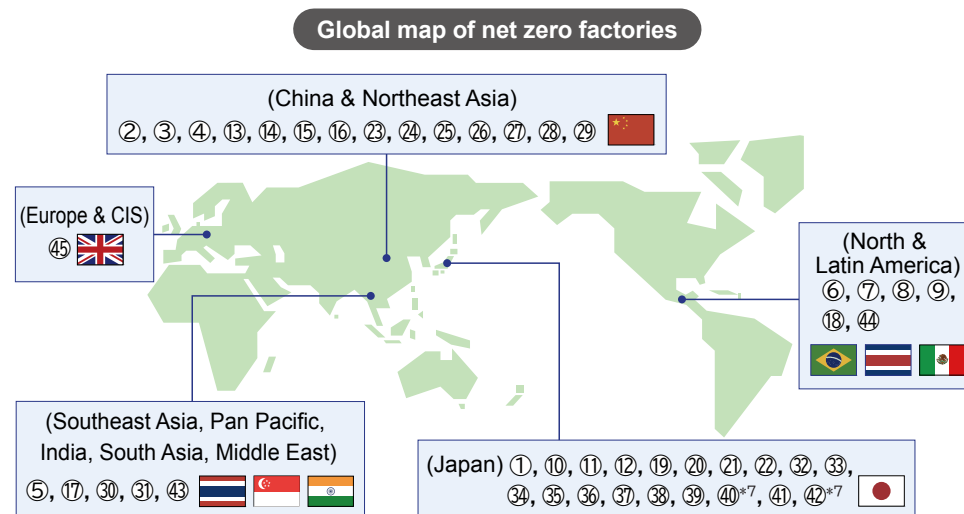
After realizing the group's first net zero factory in fiscal 2019, Panasonic Group has realized 9 net zero factories in 5 regions^{*3} by fiscal 2022. Since then, it has entered the phase to increase

the number of net zero factories: to 31 factories in fiscal 2023; 44 factories in fiscal 2024, in fiscal 2025 total 45 factories^{*4} - 19 factories in Japan, 14 factories in the China and Northeast Asia region, 5 factories in the Southeast Asia, Pacific, India, South Asia, Middle East, and Africa regions, 6 factories in the North America and Latin America regions, and 1 factory in Europe and CIS. This has exceeded the GIP2024 target of 'a total of 37 factories achieving net zero CO₂ emissions'. (Excluding the 12 factories achieved in fiscal 2024 at Panasonic Automotive Systems Corporation, which was deconsolidated in December 2024)

Nishikinohama Factory, Panasonic Energy Co., Ltd. has achieved net zero CO₂ emissions^{*5} since fiscal 2024 when it started operation of photovoltaic panels installed over the entire rooftop for maximum use of renewable energy, aiming at manufacturing in harmony with the environment. For introducing a 2 MW-class photovoltaic power generation system, a new method that does not require significant remodeling works of the transformer substation in the factory was invented and introduced, which contributed to achievement of significant reduction in the construction costs and the construction period.^{*6} The factory will further accelerate efficient and clean manufacturing by implementing energy management for the entire factory through installation of pure hydrogen fuel cell generators and energy storage systems for.



Photovoltaic power generation systems at Nishikinohama Factory, Panasonic Energy



^{*3} Five regions are: Japan; China & Northeast Asia; Southeast Asia, Pan Pacific, India, South Asia, Middle East; North & Latin America; Europe & CIS.

^{*4} ★ As of now, 45 factories have realized net zero factories.

Up to fiscal 2022: ① Panasonic Eco Technology Center Co., Ltd., ② Panasonic Energy (Wuxi) Co., Ltd., ③

Panasonic Energy (Suzhou) Co., Ltd., ④ Panasonic Manufacturing (Beijing) Co., Ltd., ⑤ Panasonic Energy (Thailand) Co., Ltd., ⑥⑦⑧ Panasonic Do Brazil (Includes 3 Factories (San Jose, Manaus, Extrema)), ⑨ Panasonic Centroamericana S.A.

Fiscal 2023: ⑩ Panasonic Energy Co., Ltd. (Sumoto Factory), ⑪ Panasonic Energy Higashiura Co., Ltd., ⑫ Panasonic Energy Nandan Co., Ltd., ⑬ Panasonic Electronic Devices (Jiangmen) Co., Ltd., ⑭ Panasonic Industrial Devices (Tianjin) Co., Ltd., ⑮ Panasonic Industrial Devices Materials (Guangzhou) Co., Ltd., ⑯ Panasonic Industrial Devices SUNX Suzhou Co., Ltd., ⑰ Panasonic Energy India Co., Ltd., ⑱ Panasonic Energy Mexico S.A. de C.V.,

Fiscal 2024: ⑲ Panasonic Industry Co., Ltd. (Motomiya), ⑳ Panasonic Energy Co., Ltd. (Suminoe Factory), ㉑ Panasonic Energy Co., Ltd. (Tokushima Factory), ㉒ Panasonic Energy Co., Ltd. (Nishikinohama Factory), ㉓ Panasonic Motor (Zhuhai) Co., Ltd., ㉔ Panasonic Motor (Hangzhou) Co., Ltd., ㉕ Panasonic Industrial Devices Taiko (Shenzhen) Co., Ltd., ㉖ Panasonic Industrial Devices (Qingdao) Co., Ltd., ㉗ Panasonic Manufacturing (Xiamen) Co., Ltd., ㉘ Panasonic Industrial Devices Materials (Suzhou) Co., Ltd., ㉙ Panasonic Industrial Devices Materials (Shanghai) Co., Ltd., ㉚ Panasonic Industrial Devices Singapore Pte. Ltd., ㉛ Panasonic Carbon India Co., Ltd.

Fiscal 2024: ㉜ Panasonic Corporation Electric Works Company Niigata Factory, ㉝ Panasonic Corporation Electric Works Company Tsu Factory, ㉞ Panasonic Solar Amorton Co., Ltd., ㉟ Panasonic Electric Works Electrical Construction Materials Mie Co., Ltd. Headquarter Factory, ㊱ Panasonic Electric Works Electrical Construction Materials Mie Co., Ltd. Anotsudai Factory, ㊲ Panasonic Lighting Devices Kumihama Co., Ltd., ㊳ Panasonic Switchgear Systems Co., Ltd., ㊴ Panasonic Energy Co., Ltd. (Wakayama Factory), ㊵ Panasonic Energy Co., Ltd. (Moriguchi Factory), ㊶ Panasonic Energy Kaizuka Co., Ltd., ㊷ Panasonic XC KADOMA, ㊸ Panasonic Manufacturing (Thailand) Co., Ltd., ㊹ Panasonic Industrial Devices Mexicana S.A. de C.V., ㊺ Panasonic Manufacturing UK Ltd.

*5 Press Release November 20, 2023

🔗 <https://news.panasonic.com/global/press/en231120-2>

*6 Press Release February 1, 2024

🔗 <https://news.panasonic.com/jp/topics/205544>

*7 Non-manufacturing sites

■ Activities for Increasing the Amount of Renewable Energy Use

To increase the amount of renewable energy in our business use, Panasonic Group has been actively promoting installation of renewable energy facilities in our own sites and renewable energy procurement from external suppliers.

The amount of renewable energy adopted at our sites^{*8} in fiscal 2025 marked 101 GWh.

Installation of renewable energy facilities has been actively encouraged in our own sites across the world in a way to suite to the regional characteristics. Particularly, photovoltaic power generation systems are recommended for installation wherever possible.

Panasonic Heating & Ventilation A/C Company introduced a photovoltaic power generation system with an output capacity of 5.2 MW at the Panasonic Appliances Air-Conditioning Malaysia Sdn Bhd. (PAPAMY) factory in Malaysia. This system has the largest capacity in the Panasonic Group, with a projected annual power generation of approx. 5,900 MWh/year and CO₂ emission



Photovoltaic power generation systems at the Panasonic Appliances Air-Conditioning Malaysia Sdn Bhd.

reductions estimated at roughly 3,912 tons per year. With this development, renewable energy is estimated to account for roughly 20% of the total power consumption at PAPAMY's air-conditioning factory and offices.^{*9}

Panasonic Connect Co., Ltd. introduced a photovoltaic power generation system based on the on-site power purchase agreement (PPA) model used by the Kobe Plant of Panasonic's Mobile Solutions Division to supplement its eco-conscious and sustainable energy use. This is the first time for Panasonic Connect to introduce photovoltaic power generation based on on-site PPA, except for its overseas sites. The projected annual power generation is approx. 811,000 MWh/year, with CO₂ emission reductions estimated at roughly 400 tons per year. This will result in roughly 15% of power use at the plant being replaced with renewable energy.^{*10}

For further examples of our renewable energy usage, see the following website:

🔗 <https://holdings.panasonic/global/corporate/sustainability/environment/site.html>

Procurement of renewable energy from external sources has been also promoted across the globe. In Japan, at our own site, we are an electricity user, and at the same time, an electricity retailer (registration number: A0136). Since 2005, we have been supplying power to our own sites, factories, and offices. Utilizing our knowhows and experience of electricity procurement and trading that we have accumulated to date, we procure 100% renewable

electricity generated from wind, etc., as well as electricity with environmental value such as those with non-fossil fuel energy certificates and credits to offset CO₂ emissions from fossil fuel. This effort contributed to converting factories in Japan, China, and Southeast Asia to net zero factories. Furthermore, the photovoltaic power station with approx. 18,000 kW capacity for use at our own sites that we determined to develop in fiscal 2022 started its operations for Panasonic Energy Co., Ltd., in February 2023. In fiscal 2024, operation of power stations with a capacity of approx. 11,500 kW started for Panasonic Automotive Systems Co., Ltd. and Panasonic Industry Co., Ltd. In fiscal 2025, an additional power generation plant with a capacity of roughly 18,000 kW came into operation as a startup power supply for Panasonic Living Appliance and Solutions Company. In the same fiscal year, full scale supplies of power from an onshore wind power generation plant started for Panasonic Energy Company and Panasonic Industry Co., Ltd. As described above, we continue to contribute to expanding use of electricity from new renewable energy sources. We also started selling to Panasonic Group employees in Japan, electricity derived from practically 100% renewable energy in fiscal 2021.

🔗 <https://news.panasonic.com/jp/topics/204036.html>

In August 2019, Panasonic Group joined "RE100"^{*11}, an international initiative that brings



Photovoltaic power generation systems at Kobe Factory, Panasonic Connect Co., Ltd.



An onshore wind power generation plant for the Panasonic Group.

together companies committed to sourcing 100% renewable electricity for their global business operations. We aim to switch all the electricity used in our sites across the world to that sourced from 100% renewable energy by 2050. Progress in fiscal 2025 was 32.5%.

*8 The amount from photovoltaic energy, wind power, and so on are included. The amount from heat pumps is excluded.

*9 Press release on December 30, 2024

☞ <https://news.panasonic.com/jp/press/jn241206-1>

*10 Press release on March 28, 2024

☞ <https://news.panasonic.com/jp/topics/205628>

*11 Press release on August 30, 2019.

Panasonic Joins RE100 Aiming for Business Operations with 100% Renewable Energy
☞ <https://news.panasonic.com/global/press/data/2019/08/en190830-2/en190830-2.html>

■ Activities for reducing energy use and CO₂ emissions

To ensure implementation of reduction of the amount of energy used and CO₂ emissions, it is important to visualize trend of the energy consumption of each facility in factory and the effects of the measures for specific emissions reduction. To date, we are working on CO₂ reduction by adopting more than 40,000 measurement equipment systems and Factory Energy Management System (FEMS) at all of our global manufacturing sites, promoting METAGEJI (Meter and Gauge)^{*12}, which visualizes and analyzes energy consumption. An example of factory energy-saving support service is on the following website.

☞ <https://www.panasonic.com/global/corporate/sustainability/eco/co2/service.html>

Panasonic Corporation is conducting a demonstration experiment of the energy solution (Panasonic HX)^{*13} using hydrogen fuel cells in Kusatsu Factory, Shiga. Panasonic Manufacturing United Kingdom (PMUK) in the United Kingdom plans to start a demonstration of power supply and demand operation in 2025^{*14} to use 100% renewable energy for energy consumed in business activities by in-house power generation using pure hydrogen fuel cells and photovoltaic cells. For the demonstration at PMUK, in addition to the existing solar panels (372kW), 21 pure hydrogen fuel cells of 5 kW type (total output: 105 kW) and storage batteries (1 MWh) will be newly installed, and the power supply and demand operation in Cardiff, UK will be monitored according to the changes in weather and fluctuations in electrical power demand, with the aim of operation to supply necessary electricity with 100% renewable energy for the Microwave Oven manufacturing plant. By using pure hydrogen fuel cells, we will not only reduce installation space and secure a stable power source, but also further improve energy efficiency by using heat generated during hydrogen power generation for heating and hot water supply. Through the demonstration of energy solutions at PMUK, we will develop solutions that best suit the regional characteristics and build relationships with local partners and business customers related to the hydrogen business.



PMUK Energy Solution

*12 METAGEJI is a coined word created by the Panasonic Group which refers to visualizing energy consumption and implementing measurable reduction measures by adopting measurement instruments, such as meters and gauges.

*13 Panasonic HX

☞ <https://re100-gx.panasonic.com/>

*14 Press Release (December 3, 2024)

☞ <https://news.panasonic.com/jp/press/jn241203-2>

■ Activities at Factories

Panasonic Energy Kaizuka Co., Ltd., which achieved net zero CO₂ emission in fiscal 2025, produces lithium-ion batteries (LIBs) used in EVs. The company has been working across organizational divisions to reduce its CO₂ emissions in line with Panasonic GREEN IMPACT, while improving productivity to respond to the increasing market demands for EVs in recent years. A Carbon Neutrality Promotion Committee, initiated by the Facility Management Division that manages facilities such as power generators, was jointly launched at three sites: the Panasonic Energy Suminoe Factory, Wakayama Factory, and Kaizuka Factory. This committee, whose participants include professionals in the fields of factory and production technologies, has been promoting production with minimum energy. Concretely, to reduce energy consumption in basic units by increasing product efficiency, they used scientific methods to established efficient drying conditions in the manufacturing process for electrode materials, which had been a bottleneck in improving efficiency in the production of electrode substrates, allowing the manufacturing speed to be increased. This method can be transferred to overseas factories such as in the U.S., where LIBs are produced on a large scale, and it is planned to introduce it on other sites from fiscal 2025. We also reduced the standby energy consumption of the charging and discharging devices used during testing by reviewing the operating procedures and eliminating unnecessary processes. To increase the ratio of renewable energy used inside and outside our factory premises, we have started to introduce photovoltaic power stations to our factory premises, purchasing photovoltaic electricity sourced from outside the factory through an offsite PPA. In fiscal 2025, we started to purchase wind power electricity through an offsite PPA.



Members from Panasonic Energy Kaizuka

■ Activities to provide supports for energy-saving in the China region

The long-term state policy announced by the Chinese government includes carbon peak out and carbon neutrality, focusing on further reductions to CO₂ emissions. With its many business sites in China, the Panasonic Group introduced a three-year energy-saving support initiative in the country in fiscal 2023 designed to achieve efficient energy-savings across the entire region in line with China's long-term state policy.

In fiscal 2025 we are lowering CO₂ emissions at our model sites by carrying out energy-saving assessments in collaboration with experts from inside and outside the Group and developing human resources to introduce independence in support of energy conservation in each region. We select and actively communicate best practices gained from the energy saving diagnoses, and provide a scheme that links facility manufacturers and our sites to solve technical issues. These efforts support each site in utilizing information comprehensively for its own energy saving activities. We are also working on visualizing our energy-saving activities and how to disseminate the information effectively, improving the infrastructure for energy efficiency by installing portable measurement equipment and providing energy efficiency analysis tools, etc. In working to establish net zero factories, we continue with our rapid and low cost energy-saving measures to improve the level of energy saving in China's regions.



Diagnosis of energy saving diagnosis in China region

Fiscal 2025 Results

These efforts in fiscal 2025 resulted in 4.5 TWh^{*15} of the energy used in business activities, and the amount of CO₂ emissions was 1.24 Mt. The fiscal 2025 investment to reduce the amount of energy used and CO₂ emissions by the efforts was 3.2 billion yen.^{*16}

^{*15} In fiscal 2021, the unit used to measure the energy consumed in business activities was changed from TJ to TWh. The consumed power is measured in kWh and the consumed fuel is measured using its calorific value and then converted to electrical power units at 3.6MJ/kWh. These two values are then totaled.

^{*16} The total amount includes all investments concerning reduction of the amount of the energy used and CO₂ emissions. Note that differences or proportions of the investment are not calculated.

^{*17} Includes Panasonic Energy Corporation of North America since fiscal 2021.

^{*18} We calculated the improvement rate of the 'CO₂ emissions intensity' versus that of fiscal 2014', which was obtained by dividing CO₂ emissions by the sales volume of all Group companies.

^{*19} The CO₂ emission relevant to fuels was calculated with the factors stated in the "Guidelines for Calculation of Greenhouse Gas Emissions" published by Japan's Ministry of Environment. The factors for purchased electricity by country per fiscal year defined in "CO₂ emissions from fuel consumption" by International Energy Agency (IEA). The FY2014 factors in the Book 2017 were used for FY2014. The FY2018-2021 factors in the Book 2019 were used for FY2018-2021. The IEA Emissions factors 2021 were used for FY2022, the IEA Emissions factors 2022 were used for FY2023, the IEA Emissions factors 2023 were used for FY2024, and the IEA Emissions factors 2024 were used for FY2025. The factors for domestically purchased electricity in Japan for fiscal 2025 stated in the "Guidelines for Calculation of Greenhouse Gas Emissions" published by Japan's Ministry of the Environment.

^{*20} Includes non-manufacturing sites after FY2023

Breakdown of Total GHG Emissions (CO₂-equivalent) in Business Activities (by category)^{*21}

[Unit: kt]

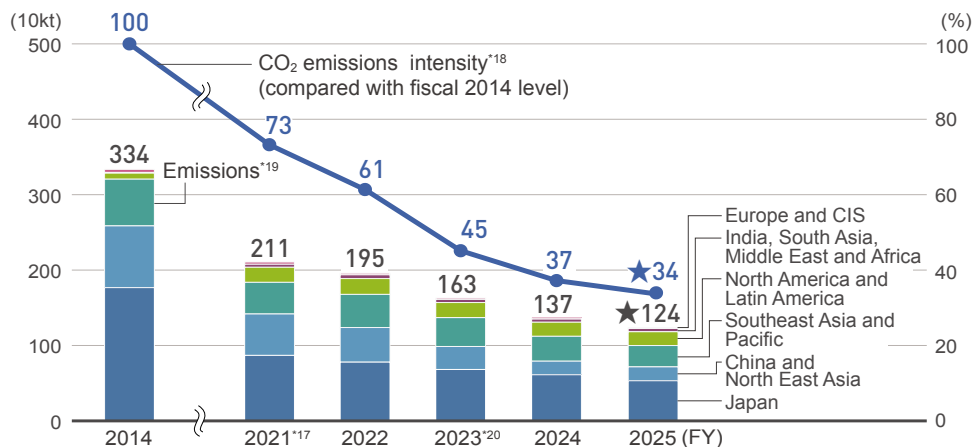
		FY2023	FY2024	FY2025	
Scope 2 Energy sources ^{*22}		1,433	1,207	★1,099	
Scope 1	CO ₂ from energy sources	224	216	★220	
	CO ₂ from non-energy	183	101	★53	
	(non-Energy Sources)	CO ₂	1	1	1
		HFC	180	97	50
		SF ₆	2	2	2
NF ₃ and others		1	1	1	
Carbon offset by credit ^{*23}		-26	-57	-79	
Total		1,812	1,465	1,291	

^{*21} The emissions of GHG other than CO₂ from energy sources by Hussmann Parent Inc. and its consolidated subsidiaries, Panasonic Corporation of North America, and non-manufacturing sites are not included.

^{*22} Electricity certificates such as Non-Fossil Certificates (NFC), International RECs (I-REC) and Green Electricity Certificates (GEC) are used.

^{*23} Carbon offset by credit based on the certification system such as J-Credits, Verified Carbon Standard (VCS), and Clean Development Mechanism (CDM) are used.

CO₂ Emission in Business Activities and CO₂ Emission (by region) Per Intensity



Resources

Materiality

Promotion of Circular Economy

Alongside changes in customer lifestyles, there is a growing global trend for customers to use only specific functions of a product, rather than using or owning the whole product. In Europe, building a circular economy for sustainable economic growth has become a major economic strategy, in a move away from continuous resource consumption. This trend is spreading around the world along with the change in customers' sense of values. In compliance with the Circular Economy Group Policy (see page 14), the Panasonic Group is moving forward in efforts to promote effective utilization of resources and maximization of customer value.

The circular economy activities we promote have two aspects: 1) creation of circular economy businesses, and 2) evolution of recycling-oriented manufacturing.

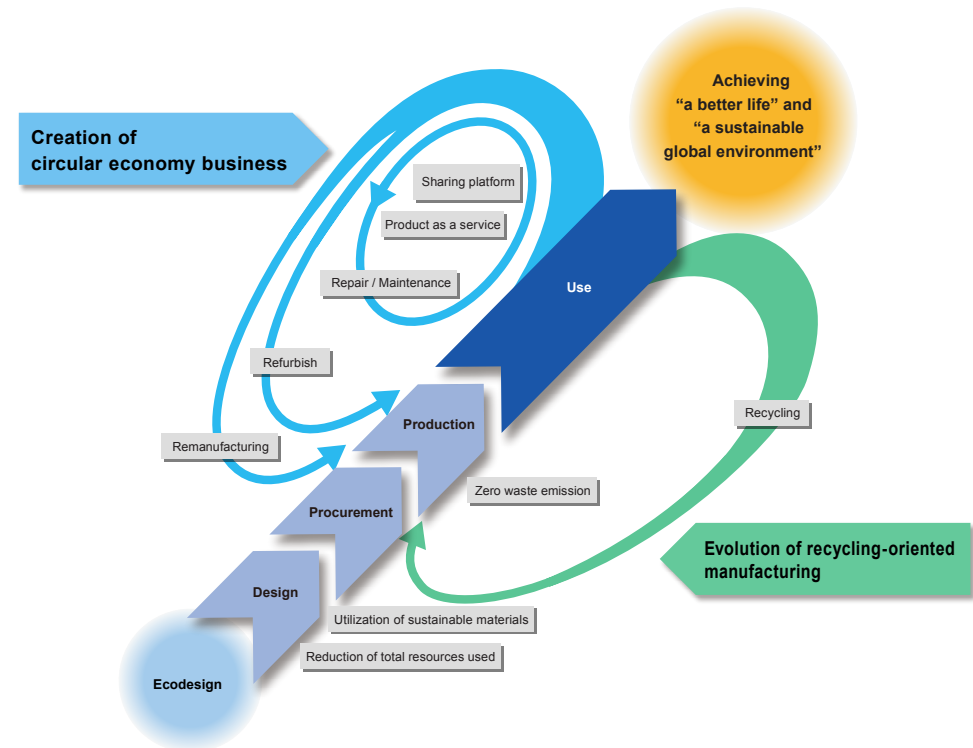
In order to realize the new value of using only product functionalities instead of using or owning the whole product, we will strive to create circular economy businesses. These include a “Sharing service”, where multiple users use the same individual product, a “Product as a service” where services are fulfilled based on functions, and “Repair and Maintenance, Refurbish and Remanufacturing”, where functions, values, and the lifecycle of a product are utilized in the most efficient manner by recycling or reusing the product itself or the components used in the products.

Alongside this, we continue to implement recycling-oriented manufacturing by reducing the total amount of resources used, utilizing sustainable resources, and striving towards zero waste emissions. Furthermore, we will develop recycling-oriented manufacturing to a higher level by using innovative materials and the latest digital technologies.

With all these activities, we aim to realize both “A better life” and a “Sustainable global environment” towards Panasonic GREEN IMPACT PLAN, based on an ecodesign concept which maximizes customer value in use by increasing resource efficiency at each process in design, procurement, and production.

[Concept for the Actions toward Circular Economy]

We will promote effective utilization of resources and maximization of customer value by creating circular economy business and evolving recycling-oriented manufacturing.



As specific activities, we have worked towards achieving the resource-related targets listed in GREEN IMPACT PLAN (GIP) 2024.

We are using the above concept in the transition to circular economy which include the development of new businesses and establishment of circular economy business models. Our Concept for Actions towards a Circular Economy comprises several elements. We broke down these elements according to the six major circular economy businesses based on the insights gained through actually running these businesses, and we re-established these elements as a practical business framework. As a result, we have managed to start 15 circular economy businesses by fiscal 2025. This exceeded the GREEN IMPACT PLAN (GIP) 2024 target, which

aimed to establish at least 13 new circular economy business models by that year.

As for recycled resin, its cumulative usage since fiscal 2023 reached 45,000 tons in fiscal 2025. However, this did not reach the target figure of 90,000 tons. The use of recycled resin did not spread quickly enough to meet the target due to a number of reasons, such as complications in producing resin parts that satisfy different characteristics suitable for different usages, difficulties in securing a stable supply, insufficient adaptability in production sites to use recycled resin, and a lack of recycling technologies. We plan to accelerate our efforts to address these problems and steadily increase the use of recycled resin. Still, our factory waste recycling rate in fiscal 2025 resulted in 99.2%, maintaining an above 99% level.

We will further concentrate our efforts to achieve our resource-related targets stated in GIP2024+1. In concrete, we plan to increase our circular economy businesses to 16. We also aim to increase the usage of recycled resin to at least 25,000 tons within fiscal 2026 to cover the unattained GIP2024 target.

We established the Global Circular Economy Project in April 2020, led by Panasonic Europe, with the aim to accelerate conversion of the Group's business into a circular economy model. In 2023, the project was reorganized into a new system due to the increasing necessity of applying the principles of a circular economy throughout our business management, driven by a deepening understanding of such principles. Understanding of the principles of a circular economy penetrated through our businesses and established an important foundation to formulate the Circular Economy Group Policy in November 2023, as well as to integrate the Circular Economy business into Panasonic GREEN IMPACT.

Creation of Circular Economy Business

We strive to promote the efficient use of resources and to maximize customer value. We are offering a washing machine sharing service as a part of the circular economy businesses. This new service is called LAUNDROOM and it is the first of its kind in the industry designed to realize the sharing of utility facilities in shared rental accommodation in Japan¹. The service uses one of our drum-type washer dryers that boasts excellent energy and water-saving capabilities, as well as providing an IoT function that enables users to view the washing machine operating status and to receive a notification upon completion of washing operations. Also, a designated repair contact will quickly respond to unexpected issues. Attention to detailed usability has evolved the service into a total solution that makes using a washing machine in a rental property shared by multiple households more comfortable and convenient.

Thus, we are working to create businesses based on a circular economy model. One of the business models created is “product as a service” for our display refrigerators and freezers as S-cubo Cs. Instead of selling them to supermarkets and other food retailers, we offer

“food refrigeration” as a service based on a monthly charge in Japan. We also newly started the S-cubo Monitoring Service, which comprehensively manages refrigerating and freezing equipment in stores. The service remotely monitors the equipment, saving energy consumption through optimization of equipment settings and detection of early signs of failure. Combined with physical services, such as equipment maintenance and early replacement advice, we provide total support for commercial refrigerating and freezing equipment. These services are expected to reduce maintenance and energy costs, and at the same time it will facilitate cheaper, low-budget store renovations by making business management more efficient.

On April 10, 2024, we launched a new business offering Panasonic Factory Refresh—certified and guaranteed refurbished products—through both sales and subscription-based services. We refurbish home appliances, such as washing machines, refrigerators, and TVs, and other products across a total of 13 categories, collected after use, to a reusable state for reselling². Those products that satisfy the high quality standards set by the Panasonic Group are then made available for sale. For example, TVs are inspected to ensure they do not carry any scratches, damage, or missing parts in the main body and accessories that could cause a malfunction. They are also thoroughly cleaned, and the image quality is checked. Any failed parts are replaced, and all the products are tested for product safety. To meet the Group standards, the display output is adjusted, and performance tests are conducted. Only after all these processes have been completed, the products are finally put on sale for customers.



Modular products can be regarded as a circular economy business as they reduce input resources by streamlining the components for efficient resource utilization.

In June 2022, we launched a modular personal care system³ for the European and North American markets. The initial system comprises a single main unit and five different detachable heads, including trimmers for beards, hair, body hair, and nose hair; a shaver; and a tooth brush. Users can purchase the necessary care parts individually. With the battery and motor being integrated into a single body, the system flexibly adapts to various personal care and grooming needs at home or when traveling for leisure or business.

Utilizing a standard design to fit the same main unit and power adapter reduced the product weight by approximately 60% compared to conventional products, thereby saving resources. In recognition of our contribution to environmental impact reduction through streamlined system design, we received the Gold Award 2023 under the iF Design Award, sponsored by iF International Forum Design. Since then, the product has continued to be featured in various media and received high evaluation including awards.

In September 2024, a further four different heads were introduced in the European and U.S. markets. With these new heads, the product now offers whole-body care, including haircutting with a professional blade, precise beard trimming, eyebrow shaping, facial brushing, and removing hard skin from feet.

In the U.S. market, where approximately 7 million tons of e-waste are produced every year, we have a recycling program that allows users to purchase the modular personal care system at a special price by returning their old electronic personal care devices. Collected personal care devices are recycled to contribute to resource circulation. We started sales of the system in the Middle East in September 2023, and in Australia in April 2024, further contributing to reducing environmental impact globally.



Our TOUGHBOOK, a notebook PC with a robust casing, also uses a modular design allowing flexible enhancement of the required functions through chargeable options. For example, companies can adopt an IC card authorization system for PC usage without replacing their current TOUGHBOOKs—by simply adding optional non-contact IC card readers⁴. This modular design not only offers the flexibility for future functional enhancement but also prolongs product life. In case of failure, only the affected component needs to be replaced. This reduces waste and loss, which in turn contributes to reducing environmental impact.

As another subscription model, we started a service for our rental housing, “noiful,” in January 2022 in Japan. Noiful⁵ offers a rental service for the latest home appliances pre-installed in a rental property, including support services to explain how to use the appliances, perform simple repair and replacement, and clean the appliance when moving in and out. In the domestic real estate market, housing stock is on an increasing trend due to the population decrease etc. This leads to a range of social issues, such as an increase in aging buildings and more vacancies. Noiful offers “plentiful life without owning” to tenants, enabling people to move into houses more easily, which could help invigorate the rental housing market. This novel solution also contributes to solving the social issue of increasing vacancies by adding a value to the rental property for owners and management companies. Noiful is also designed to be a business model offering a recurring and stable high income, and new value to the three parties usually involved in the business: property owners, management companies, and tenants. The reuse and recycling of home appliances reduces environmental impact by eliminating the necessity of disposal and contributes to building a sustainable society and life.

Products that are made using recycled resources are regarded as a part of our circular economy business for their effective utilization of resources. In October 2024, we launched a drum-type washer dryer with a heat pump, the NA-LX129D series. Around 20% of their components are made of recycled resin, including a frame base that supports the main body, a cover for the heat pump unit, and the fan casing that circulates air between the washer drum and the heat pump unit. The frame base in particular was designed by combining computer-aided engineering (CAE) and actual machine testing to ensure its reliability to support the entire weight of the machine and withstand the vibration from spinning. The product proved that recycled resin could sufficiently deliver the robustness and quality required by a washing machine.



In June 2022, we began installing collection boxes for used dry batteries at 31 local 7-Eleven stores in Thailand, in cooperation with CP ALL Plc., the operator of 7-Eleven. In March 2024, we established a scheme to recycle the collected used dry batteries manufactured by us, in partnership with UMC Metals Ltd., a Thai steelmaker. This initiative allows us to melt our dry batteries, which do not contain environmentally harmful substances, and recover reusable materials, thereby contributing to efficient resource utilization. As of June 2024, we have achieved a total of 1,000 collection box locations at 7-Eleven stores.



As described above, we are working to create circular economy businesses. We completed mapping out the relationships between our existing businesses and a circular economy based on the analytical method that we developed in fiscal year 2020. According to this mapping, we are steadily converting our businesses to a circular economy structure and two more circular economy businesses were added last fiscal in addition to our thirteen existing ones. As a result, we have established 15 new circular economy businesses related to our GIP2024, exceeding our target of 13 business models. We are continuing to expand the scale of our circular economy business.

1	Subscription services for refrigerator/freezer display cases	9	Use of factory wastes for parts
2	Subscription services for cooling box for pharmaceuticals	10	Adoption of paper-based battery packaging and used dry batteries recycling
3	Akari E Support services (LED Lighting leasing service)	11	Maintenance service for air ventilation systems in road tunnels
4	Battery management business in the PC subscription services	12	Refurbishment of washing machines, refrigerators, TVs, etc.
5	Effective utilization of owned buildings	13	Vacuum cleaners made with recycled resin
6	Business development of mixed cellulose plastics	14	Modular design of personal care products and corporate-use PCs
7	Refurbishment services with Lawson	15	Washing machine sharing service
8	Subscription services for home appliances (noifull)		

*1 See <https://news.panasonic.com/jp/press/jn241112-1>

*2 See <https://news.panasonic.com/jp/press/jn250217-1>

*3 See <https://shop.panasonic.com/pages/multishape>

*4 See <https://news.panasonic.com/jp/press/jn240620-1>

*5 See <https://news.panasonic.com/jp/press/jn220119-1>

Evolution of Recycling-Oriented Manufacturing

We use many kinds of resources, including iron (28% of total resources used) and plastic (11% of total resources used), because of our wide range of products and businesses, from home appliances, components such as semiconductors and batteries, housing, and B2B solutions. In recycling-oriented manufacturing, we are further working on reducing the input of virgin resources, while increasing the amount of recycled resources. And in that context, we are working to establish a circular system according to resource type and features.

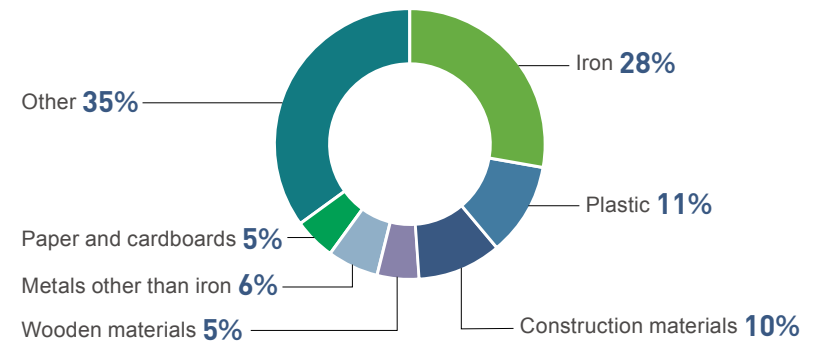
Furthermore, we are clarifying the use of recycled resource use by identifying the volume of each type of resource used across the Panasonic Group. For example, the case of recycled resin, we used approx. 15,000 tons of recycled resin in our products in fiscal 2025 bringing the total usage since fiscal 2023 to 45,000 tons. This was achieved by producing resin that has characteristics suitable for its usage purposes, securing stable supply, establishing adaptability in production sites to use the recycled resin, and developing recycling technologies. However, the above efforts did not meet the required level, and therefore we could not attain the GIP2024 target. We plan to accelerate our efforts to address these issues to steadily increase use of recycled resin. Moreover, we are promoting the development of plant-based resin with lower environmental impact and its application for the products.

As for the factory waste recycling rate^{*6}, we had traditionally set different targets for Japan and countries outside Japan according to the relevant local infrastructures. However, given increased awareness of the importance of zero waste emission activities, we have set a globally

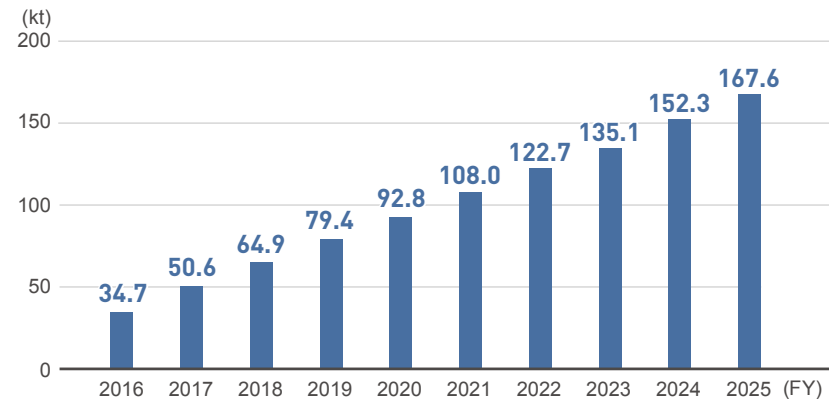
standardized target since fiscal 2011 and are taking steps to improve the standard level of waste recycling across the entire Group. The factory waste recycling rate in fiscal 2024 was 99.2% compared to our target of more than 99%, achieving the target (see [page 16](#)). We will continue to implement measures to achieve the zero waste emissions.

*6 Factory waste recycling rate = Amount of resources recycled / (Amount of resources recycled + Amount of landfill)

Breakdown of Total Resources Used in Fiscal 2025 (by category)



Results of Recycled Resin Usage (Cumulative total from fiscal 2016)



Reduction in Resources Used

To minimize the use of resources for production, we continuously look to reducing the weight of our products. Through the Product Environmental Assessment (see [page 32](#)), we have been promoting resource saving from the product planning and design stage, such as using

less resources, making our products lighter and smaller, and using less components. We also implement various measures from the standpoint of resource recycling throughout the product life cycle, such as component reuse, longer durability, use of recycled resources, easier battery removal, and labels necessary for collection/recycling. Examples of weight reduction and recyclable product design are also introduced in the following website.

https://www.panasonic.com/global/corporate/sustainability/eco/resource/recycling_oriented_manufacturing.html

■ Use of Sustainable Materials

Under the concept of “product-to-product”, we are enhancing our initiatives of utilizing resources recovered from used products. As for resin, we promote the reuse of resin recovered from our used home appliances (refrigerators, air conditioners, washing machines, and TVs) for our products.

We also started recycling scrap iron recovered from used home appliances in our products in 2013. Examples of “Products to Products” and inventions to streamline and automate the process of recovering resources from used products are introduced in the following website.

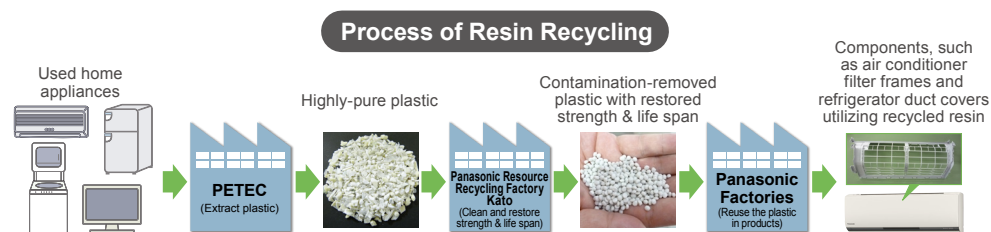
https://holdings.panasonic/global/corporate/sustainability/environment/resources/recycling_oriented_manufacturing.html

■ Our Approach to Resources Recycling

<https://holdings.panasonic/global/corporate/sustainability/environment/resources-recycling.html>

■ Enhanced Use of Recycled Resin

To efficiently utilize resin recovered from used home appliances in addition to metals such as iron, copper, and aluminum, our recycling factories—Panasonic Eco Technology Center Co., Ltd. (PETEC), and Panasonic Resource Recycling Factory Kato (PRRFK) of the Living Appliances and Solutions Company—work together for resin recycling.



Using technologies such as our original near-infrared identification technology, PETEC is capable of sorting shredder residue of waste home appliances into three major types of resins

with different purposes and properties—polypropylene (PP), acrylonitrile butadiene styrene (ABS), and polystyrene (PS)—at a material purity of over 95%.

The recycled single resins sorted and recovered at PETEC are then transferred to the adjacent Panasonic Resource Recycling Factory Kato to be further purified and processed to recover their chemical properties. Panasonic Resource Recycling Factory Kato (PRRFK) is a manufacturing and development site that promotes the use of recycled resin at our Living Appliances and Solutions Company, a home appliance manufacturer and seller. The factory plays an important role in enhancing recycled resin utilization by developing recycling technologies, such as a more efficient method that improves the performance of recycled resin. Generally, the strength and lifespan of resin deteriorate over time. This is why its chemical properties have to be recovered to the level of new resin to make them usable as materials and components in new products. Due to the differences in the physical properties required by different products, we have been examining the properties of recycled polypropylene, polystyrene and acrylonitrile butadiene styrene, and have developed technologies to create new formulas for resin components, adding our own proprietary antioxidant and mixing recycled resin with new resin. To increase usage of recycled plastic across Panasonic Group, we plan to find recycled plastic suppliers based on the recycled plastic development and quality assessment techniques cultivated in our Panasonic Resource Recycling Factory Kato.



Near-infrared sorting machine that can sort three types of resin simultaneously

Development and Use of New Sustainable Materials

Cellulose fiber is made from natural resources such as pulp and wood chips and is drawing social attention as a material with low environmental impact. In fiscal 2016, we commenced research and development into cellulose fiber aiming to reduce the use of fossil-based resin. In fiscal 2019, we successfully produced an easy-to-use molding material that is as flexible as conventional resin while reducing the use of fossil-based plastic by mixing plant-based cellulose fiber at a high concentration level into the resin. We further increased the cellulose fiber concentration level, and released these materials under the brand name, “kinari.” In 2022, we started mass production and sales of kinari55-PP, a resin made with 55% cellulose fiber⁷. Then in 2024, kinari70-PP, a resin with 70% cellulose fiber followed⁸. Within the same year, we commenced sample sales of kinari90, which is 90% biomass resin made by combining cellulose fiber and 90% or greater biomass polyethylene produced from sugarcane bagasse (pulp left after the juice is extracted)⁹.

Our additional focus is on fully-biodegradable molding materials. We produced a molding material that can be biodegradable in soil by combining cellulose and plant-based (e.g. polylactic acid) resins in fiscal 2023^{10, 11}. Aiming at further reduction of environmental contamination risks

from our products when they are released into the natural environment in part or as a whole, we successfully produced a material that is marine biodegradable in fiscal 2025. This is known to be difficult due to the lower concentration of microorganisms in the sea compared with soil^{*11}. These molding materials are certified by the Japan Bioplastic Association as a biodegradable biomass plastic and a marine-degradable biomass plastic.

Further, we are working to increase the strength of the cellulose fiber molding materials to expand our kinari applications to be an alternative to fossil-based resin. We produced a material that demonstrates a strength equivalent to PBT-GF30% (polybutylene terephthalate with 30% glass fiber)



Left: Robust cellulose fiber molding material
Right: Car interior parts made with robust cellulose fiber molding materials

at 80°C utilizing our newly developed plastics engineering compounding technology. We have also successfully developed cellulose-fiber molding materials with less density^{*12}.

Relating to “kinari” production, we are reinforcing relationships with local communities to utilize their regional resources under collaboration. Among these collaborative projects, we concluded an agreement with Fukuchiyama City, Kyoto Prefecture, to use their timber from forest thinning. We also jointly commercialized our eco-friendly tableware using this timber. On September 4, 2023, all 23 municipal primary schools and junior high schools in Fukuchiyama City started using some 6,700 sets of this tableware for their school lunches. At the same time, all these schools started an environmental education program in which we cooperated by providing the program contents. Another collaboration with a local company took place in Okinawa Prefecture. Together with Food Reborn Co., Ltd., in 2024 we developed a kinari tumbler utilizing pulp from Okinawan pineapple leaves^{*13, *14}.

Such efforts relating to our kinari resin have earned a high social reputation and resulted in a number of awards, including the MEXT Minister's Prize under the FY2021 50th Japan Industrial Grand Prize held by Nikkan Kogyo Shimbun, Ltd., and the Contribution Prize under the 57th Ichimura Industrial Awards, hosted by the Ichimura Foundation for New Technology in April 2025^{*15}.

In the area of housing materials, we exclusively developed a wood-based flooring substrate that utilizes 100% recycled wooden materials (excluding glue) made from construction waste and unused materials. Thanks to our wide-ranging processing technologies, we successfully created a substrate with high density with superior solidity compared with general plywood and which offers excellent scratch and dent resistance. The starch in wooden materials can attract insects (lyctus), however, our product is insect resistant as it has a low starch content. The substrate also offers excellent scratch and dent resistance and is therefore ideal for coping with wheels on chairs and furniture. The board's tongue and groove structure is also designed to deliver

easy installation. Further, a part of the sales revenue from this sustainable flooring is donated to Gunma Prefecture's forestry fund. The entire life of the floorboarding is consistent with an approach. This product can reduce the consumption of natural materials and also contributes to preserving biodiversity (see [page 70](#)).

We intend to develop more new products with this technology, focusing also on developing new recyclable resources.

*7 See <https://news.panasonic.com/jp/press/jn190708-1>

*8 See <https://news.panasonic.com/jp/press/jn210204-1>

*9 See <https://news.panasonic.com/jp/press/jn220318-2>

*10 See <https://news.panasonic.com/jp/press/jn221206-1>

*11 See <https://news.panasonic.com/jp/press/jn250108-8>

*12 See <https://news.panasonic.com/jp/press/jn250515-2>

*13 See <https://news.panasonic.com/jp/press/jn230825-2>

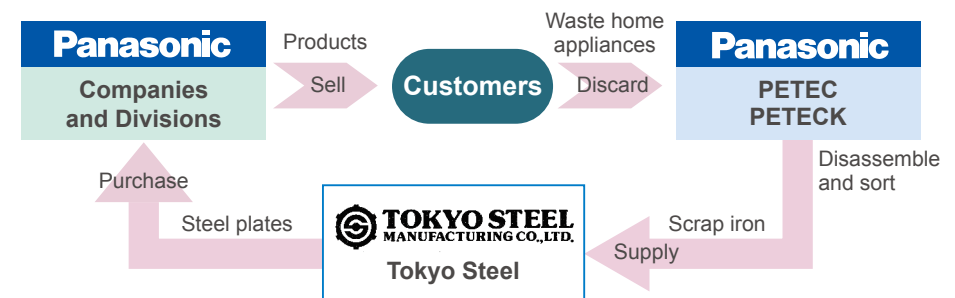
*14 See <https://www.city.fukuchiyama.lg.jp/site/kyouiku/59063.html>

*15 See <https://news.panasonic.com/jp/press/jn250421-2>

Building a Recycling Scheme for Scrap Iron

Jointly with Tokyo Steel Co., Ltd., we started a recycling scheme for scrap iron in July 2013. In this scheme, we recover the scrap iron from used home appliances and Tokyo Steel makes it into steel sheets. We then purchase the sheets back as a material for our products. Supplying scrap iron for recycling and repurchasing the recycled iron is the first scheme of its kind in the Japanese electrical manufacturing industry.

Self-recycling Scheme for Electric Steel Plates



Specifically, scrap iron from home appliances collected and treated at PETEC and Panasonic Eco Technology Kanto Co., Ltd. is supplied to Tokyo Steel, where the scrap iron is processed into electrical steel plates^{*16}. We procure the recycled steel plates and utilize them in products. Discussions with Tokyo Steel commenced, and we have worked together since then to improve

the quality of recycled iron to a level sufficient for production use, as well as developing the technology to improve the applicability of the recycled iron. From this we identified the optimum application of the electrical steel plates, and refined its specific features (e.g. shape, strength, and weldability) to meet application-specific requirements. The use of thin electrical steel plates in our products was first made possible. Through this close collaboration, we materialized this recycling scheme, a scheme where a home appliance recycling company that we own supplies scrap iron to be used to make electrical steel plates. The amount of scrap iron we initially supplied to Tokyo Steel was about 50 t per month. In fiscal 2025, it reached over 1,600 tons per year, and the recycled steel is being used in our Group products, including washing machines and ceiling materials for housing.

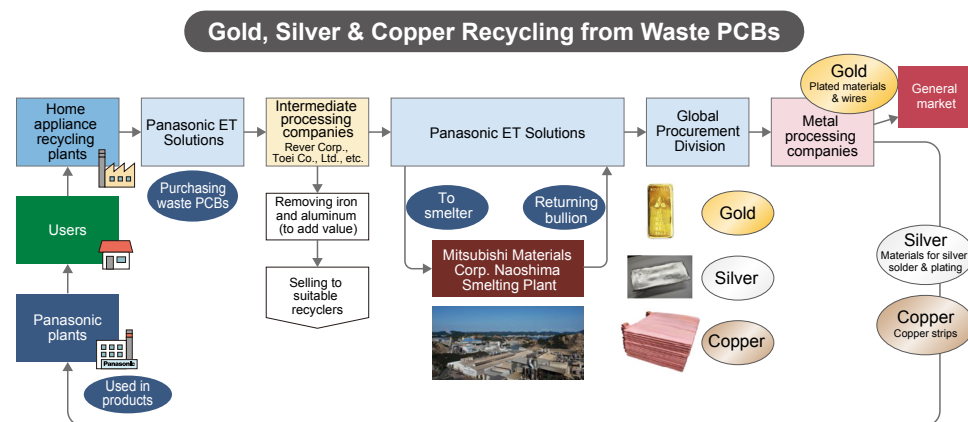
Beyond used products, we also recycle waste generated from factories. In Niigata Plant, we supply iron scrap generated during production to an electric arc furnace manufacture and utilize the iron recycled by the manufacturer in some of the products made in the plant^{*17}. This trial of making iron from scrap supplied by our plant and then utilizing the recycled iron in the same plant is the first of its kind within the Panasonic Group. We are also running a similar scheme for resin.

*16 Steel produced from scrap iron melted and refined in an electric arc furnace.

*17 See <https://www2.panasonic.biz/jp/lighting/facilities/baselight/id/environment/>

Gold, Silver, and Copper Recycling from Waste PCBs

The Panasonic Group is running the Product-Material-Product (PMP) Loop scheme together with Mitsubishi Materials Corporation. In this scheme, gold, silver, and copper are extracted from waste printed circuit boards (PCBs) formerly installed in our home appliances, and reused within and outside the Panasonic Group^{*18}.



The scheme works as follows: One of our group companies, Panasonic ET Solutions Co., Ltd. (PETS), recovers waste PCBs from home appliance recycling plants and repair sites across Japan, and commissions initial waste processing to our recycling partner companies. The recycling companies remove the iron and aluminum during shredding and smelting to improve the quality of waste PCB materials. The processed PCBs are then passed to Mitsubishi Materials. Mitsubishi Materials extracts gold, silver, and copper from the waste PCBs through smelting and returns the materials to PETS. The recovered gold, silver, and copper are made into gold plating solution, copper wire, etc. to be utilized in our products again. Total amounts of recovered metals from the waste PCBs through the PMP Loop scheme to date have reached 1.1 tons of gold, 33 tons of silver, and 8,100 tons of copper^{*19}.

*18 See <https://news.panasonic.com/jp/press/jn250117-4>

*19 Based on the research of our Group and Mitsubishi Materials Corporation as of December 2024.

Zero Waste Emissions—Improving Factory Waste Recycling Rate

From the viewpoint of effective usage of resources, we believe that generation of waste and revenue-generating waste at factories must be minimized, even if such waste could be sold as valuable commodities. Based on this belief, we identify the amount of generated waste (including both revenue-generating waste and factory generated waste) and classify it into: (1) recyclable waste (including those that can be sold and those which can be transferred free of charge or by paying a fee), (2) waste that can be reduced by incineration or dehydration, and (3) landfill (waste with no option other than being sent to landfills). We reduce the emission of waste by boosting yield in our production process and increasing the recycling rate of our waste materials. Accordingly, we strive globally toward achieving our Zero Waste Emissions from Factories^{*20} goal by reducing the amount of landfill to nearly zero. As a result of various activities, the factory waste recycling rate in fiscal 2025 was 99.2%, achieving the 99% target in our GIP 2024. In addition to the waste plastic recycling, we will introduce more recycling activities which aim to maintain and improve the factory waste recycling rate.

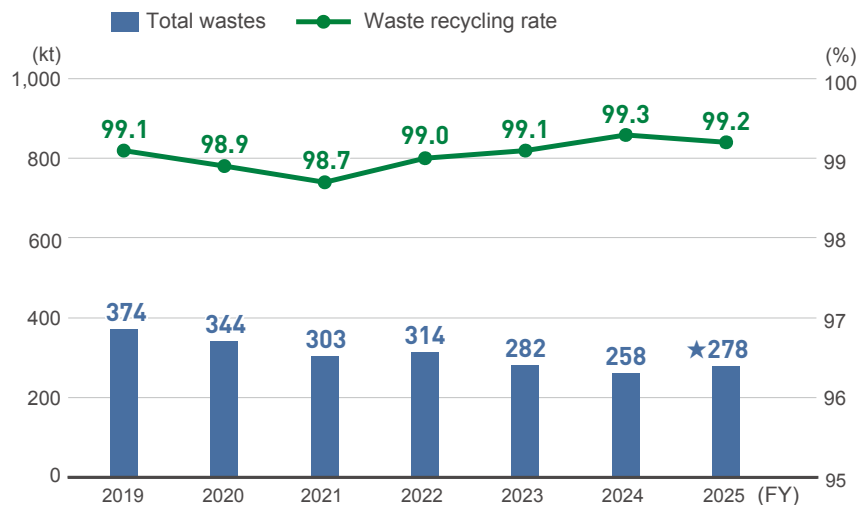
As an initiative to reduce the amount of final disposal of waste and valuables, we will reduce the amount of materials that are particularly difficult to recycle, such as thermosetting resins. We are also strictly adhering to waste sorting practices in production processes to further expand the reuse of resources.

Because waste recycling rates in our overseas factories lag behind those in Japan, we have worked to improve the average level of recycling activities by sharing information within and between regions outside Japan. Specifically, in addition to accelerating the information sharing on waste recycling issues between our local factories and group companies in Japan, we also promote the sharing of excellent examples and know-how among our factories across regions by utilizing BA Charts^{*21} prepared by each region, following our long-standing approach toward CO₂ reduction activities.

*20 Definition by the Panasonic Group: Recycling rate of 99% or higher. Recycling rate = Amount of resources recycled/(amount of resources recycled +amount of landfill).

*21 A chart-format summary of comparisons between "before and after" implementation of waste reduction and recycling measures.

Amount and Recycling Rate of Total Wastes Including Revenue-generating Waste

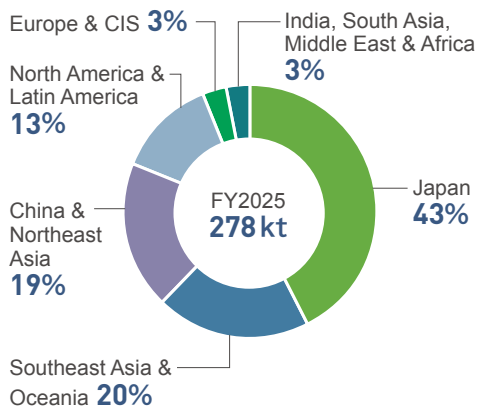


Breakdown of Total Wastes Including Revenue-generating Waste for Fiscal 2025 (by category)

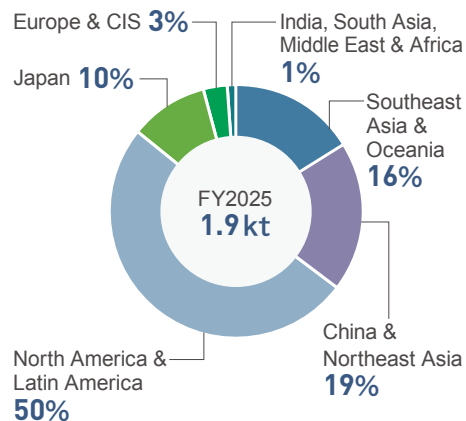
Items	Total wastes	Recycled	Landfill
Metal scrap	122	120	0.03
Paper scrap	30	29	0.1
Plastics	33	32	0.6
Acids	17	10	0.09
Sludge	9	8	0.6
Wood	25	24	0.03
Glass/ceramics	3	3	0.06
Oil	10	9	0.04
Alkalis	18	16	0.03
Other *22	10	9	0.2
Total	278	262	1.9

*22 Combustion residue, fiber scraps, animal residue, rubber scraps, debris, ash particles, items treated for disposal, slag, infectious waste, polychlorinated biphenyls (PCBs), waste asbestos.

Breakdown of Total Wastes Including Revenue-generating Waste (by region)



Breakdown of Landfill (by region)



Global Initiatives for Used Product Recycling

For the purpose of efficient use of natural resources and prevention of environmental pollution, many countries around the world have been enacting recycling laws and developing their recycling systems. Examples include: the Law for Recycling of Specified Kinds of Home Appliances (Home Appliance Recycling Law) and the Act on the Promotion of Effective Utilization of Resources in Japan, the WEEE (Waste Electrical and Electronic Equipment) Directive in the European Union, and recycling-related laws in many states in the United States as well as in China. In addition to complying with the Basel Convention which controls the transfer of hazardous waste to non-OECD countries as well as with related laws in respective countries, the Panasonic Group strives to establish the most efficient recycling system in each country that is in line with its local recycling infrastructure, including the utilization of third parties.

Product recycling results in fiscal 2023 are as shown below. As for the situation outside Japan, with the decrease in the volume of collection and recycling due to recent reforms of business areas in various countries, the weight of collected products is on a flat or downward trend.

FY2024 Results

Japan Processed approx.	145.3 kt of four kinds of used home appliances
USA Collected approx.	110 t of used electronic products

Product Recycling Initiatives in Japan

In response to the Home Appliance Recycling Law of 2001, which covers four specified kinds of home appliances^{*23}, manufacturers were grouped into two groups, Group A and Group B, to collect and recycle the four specified kinds of used home appliances. We belong to Group A, and to work on recycling, we have established Ecology Net Co., Ltd. jointly with Toshiba Corporation to operate and manage a geographically dispersed recycling network through the effective use of existing recycling facilities nationwide. This management company supervises 319 designated collection sites (shared by Group A and Group B) and 30 recycling plants, based on consignment from Group A manufacturers (18 companies including the Panasonic Group). Additionally, we invest in Panasonic Eco Technology Center Co., Ltd. (PETEC), Panasonic Eco Technology Kanto Co., Ltd. (PETECK), and Chubu Eco Technology Co., Ltd. (CETEC)^{*24} and exchange information with product manufacturing divisions to develop



Automatic Dismantling System for Used Appliances

easy-to-recycle designs, as well as conducts research and development to efficiently recover and supply more resources. In fiscal 2024, we recycled approx. 145.3 kt of the four specified used home appliances.

Although the statutory recycling rate^{*25} is being raised in phases, our recycling plants have been achieving recycling rates higher than the legal requirement by reviewing and improving recycling equipment and processes in view of the characteristics and materials of respective products as well as higher recycling efficiency.

To address the challenges facing the home appliance recycling industry, our group has begun to develop technologies to mechanize dismantling operations that require much manual labor.

We have begun to develop technologies to mechanize dismantling operations that require much manual labor. In the future, we have developed the Automatic Dismantling System for Dismantled Home Appliances, focusing on air conditioner outdoor units, which are expected to increase in the amount collected.

While maintaining the quality of disassembly for each part, the process from the cover of the outdoor unit to the removal of the compressor, which takes the most time in the disassembly process, is automated. To automate the process from the cover of an outdoor unit to the removal of a compressor. This enables more stable and continuous recycling of home appliances.

As for PETEC, it promotes high grade single-plastic recycling using plastic recognition equipment.

See [page 60](#) for more details.

*23 Air conditioners, TVs, refrigerators/freezers, and washing machines/clothes dryers.

*24 PETEC is a company fully invested by the Panasonic Group, and PETECK and CETEC are joint ventures between Mitsubishi Materials Corporation and the Panasonic Group.

*25 Statutory recycling rate = Recycling rate specified by law (Valuable resource weight/Total weight of used home appliances).

The statutory recycling rates were raised in 2009 and 2015, and are currently at least: 80% for air conditioners, 55% for CRT TVs, 74% for LCD, Organic EL and plasma TVs, 70% for refrigerators and freezers, and 82% for washing machines and clothes dryers.

🔗 [Overview of Recycling of Specified Used Home Appliances \(Japan\)](https://holdings.panasonic/global/corporate/sustainability/environment/resources/recovery/recycling.html)

<https://holdings.panasonic/global/corporate/sustainability/environment/resources/recovery/recycling.html>

🔗 [Panasonic Eco Technology Center Co., Ltd. \(PETEC\)](https://panasonic.net/eco/petec/)

<https://panasonic.net/eco/petec/>

■ Efforts in the Europe / CIS Region

WEEE Directive and Circular Economy

◇ WEEE (Waste Electrical and Electronic Equipment)

The WEEE Directive 2012/19/EU is a piece of European Union legislation aimed at reducing the environmental impact of electrical and electronic waste. It promotes the reuse, recycling, and recovery of such waste and places responsibility for disposal on producers. Panasonic has proactively developed solutions to all these requirements. Panasonic has a very diverse product range in Europe. To manage our WEEE compliance across the EU, it has been our policy to register directly with appropriate recycling schemes in countries where we have legal company presence.

◇ Circular Economy

Circular Economy is the key driving factor for future waste legislations in Europe.

Recycled content becomes increasingly important in Europe and will be more and more included into national laws and tender processes. If products don't meet certain Circular Economy criteria, the recycling fees will increase. If products are easy to recycle, contain recycled material, easy to repair, etc., the recycling fees will decrease. Panasonic is considering how to prepare our business for such new recycled material requirements.

◇ European Climate Goals

Europe's Green Deal and Circular Economy Action Plan have also placed immense pressure on companies to reduce waste, lower emissions, and use resources more efficiently.

For Panasonic, this isn't just a compliance issue - it is an opportunity.

◇ Looking Ahead

Panasonic's journey into the circular economy has proven that a multinational company can adapt to an age where sustainability isn't a side goal but a central strategy.

With evolving EU legislation, including mandatory recycled content targets and right-to-repair laws, Panasonic is poised to expand its circular practices even further.

■ Efforts in North America

The Panasonic Group continues its leadership role in establishing and operating a recycling system for waste batteries and consumer electronic products in North America. Following the startup of a state recycling law in Minnesota in July 2007, we established the Electronic Manufacturers Recycling Management Company, LLC (MRM), jointly with Toshiba Corporation and Sharp Corporation in September of the same year, and began recycling TVs, PCs, and other electronic equipment.

With collaborative ties to several recycling companies, MRM operates collection programs on behalf of numerous companies across 20 states and the District of Columbia. The cumulative total of collection by MRM has exceeded 1.7 billion lbs. (approximately 771 kt) since its inception in 2007.

As for waste batteries, we established Call2Recycle in 1994 jointly with other battery manufacturers, and now provide recycling programs for rechargeable batteries throughout the US and Canada. Call2Recycle provides collection program and a robust retail collection network for over 400 companies, and collected more than 260 M pounds (118 kt) of primary and rechargeable batteries in the US and Canada since the organization's inception.

Recycling end-of-life products in Canada started in 2004 with the Alberta Government Extended Producer Responsibility (EPR) Regulation. Since then a total of ten provinces and two territories have legislated WEEE, each with their own unique parameters and requirements. In an effort to harmonize these programs, Panasonic Canada takes an active role in the governance of the Electronic Product Recycling Association, a not-for-profit management organization. EPRA collected 0.137 kt's of electronics in Ontario.

■ Efforts in China

In China, we are engaged in activities to clarify the scope of products covered by the Second Catalog (published in February 2015) of the Regulation for the Administration of the Recycling and Treatment of Waste Electrical and Electronic Products, which was published in May 2012 and enforced in July of the same year. In addition, we actively gather information and submit comments on setting unit-based rates for the covered products, toward early disclosure of information by Chinese governmental organizations such as the Ministry of Environmental Protection and the Ministry of Finance.

We are also conducting an assessment of the development of the Plan on Promoting Extended Producer Responsibility promulgated by the government in January 2017, and reviewing our responses toward the expected publication of operational rules to the China Solid Waste Environmental Pollution Prevention Law which was enforced in September 2020, as well as the planned replacement of consumer products starting in 2024.

■ Efforts in Southeast Asia and Oceania

Vietnam

The Law on Environmental Protection 2020 sets out requirements for a wide range of environmental issues, including the enhancement of e-waste management in Vietnam. The Government has also issued "Decree 08/2022 Detailing a Number of Articles of the Law on Environmental Protection" and "Circular 02/2022/QĐ-TTg Detailing the Implementation of a Number of Articles of the Law on Environmental Protection," which took effect since January 10,

2022 and requires producers/ importers to contribute financially for waste treatment of primary batteries from January 1, 2022. Panasonic Sales Vietnam (PSV) has actively engaged in compliance efforts since, including timely financial contributions to support waste treatment for primary batteries and operational adjustments to meet evolving environmental regulations.

On January 06, 2025, the Government issued “Decree No. 05/2025/NĐ-CP,” which further details and supplements provisions related to extended producer responsibility (EPR) under the Law on Environmental Protection. This Decree expands requirements for producers and importers to contribute financially or self-manage e-waste recycling for rechargeable batteries and other electronic products. The recycling cost norm (Fs) for a unit weight of in-scope product or packaging has also been released under “Circular No. 07/2025/TT-BTNMT,” which took effect since February 28, 2025.

Between April 2024 and March 2025, PSV successfully collected a cumulative total of over 13,100 kg of e-waste, which was sent to licensed vendors for recycling and treatment. This achievement reflects PSV's ongoing commitment to ensure compliance with environmental regulations and to promote sustainable practices in electronic product lifecycle management.

PSV has also taken action to submit the necessary product import and financial contribution declarations to the Vietnamese government as required under “Decree No. 05/2025/NĐ-CP”. PSV will continue to work closely with the government to support the implementation of an effective waste treatment and e-waste recycling scheme in Vietnam.

Australia

The National Television and Computer Recycling Scheme (NCRS) was established in Australia in 2011. Effective since 1 July 2021, the NCRS has been superseded by the Recycling and Waste Reduction (Product Stewardship –Televisions and Computers) Rules 2021 made under the Recycling and Waste Reduction Act 2020, which will provide a new legislative framework to manage waste, recycling and product stewardship. Currently, the national framework covers televisions and computers, including printers, computer parts and peripherals.

Panasonic Australia (PAU) partnered with E-cycle Solutions, a co-regulatory arrangement approved by the Australian government to fulfill its obligation under the national scheme, since May 2021. Between January 2024 and December 2024, 20 tons of e-waste were recycled.

Since April 2021, PAU has also joined the Battery Stewardship Council (BSC) as a full member. As part of the obligations as a member, PAU has also been contributing to recycling costs for batteries imported, including 68 tons of batteries imported between January to December 2024.

Singapore

The Resource Sustainability Act introduced in Singapore in 2020 requires producers of

regulated consumer products to join the licensed Producer Responsibility Scheme (PRS), which started in July 2021. For Compliance Year 4 (July 2024 - June 2025), a Collection Target of 60% (of weight supplied) was set for regulated Large Household Appliances (LHAs) and 20% for Portable Batteries. Panasonic Singapore has been working closely with the authorities and PRS operator to ensure the smooth implementation of the PRS. A total of 8,416 tons of regulated e-waste were collected by the PRS operator, of which LHAs comprised of a total of 90% by weight between January to December 2024.

Other Countries in Southeast Asia and Oceania

Regulators in Malaysia, Thailand, the Philippines, and New Zealand are also gearing towards the global trend of mandating end-of-life product recycling. Discussions with regulators and industry bodies are in progress. We hope to contribute to the formulation of sustainable e-waste management policy in each country through engagement with local governments and industry associations and participation in pilot recycling projects.

■ Efforts in India

In India, the updated e-waste recycling law has been implemented by the Ministry of Environment, Forests and Climate Change (MoEFCC) from the 1st of April 2023, with Extended Producer Responsibility (EPR) targets based on end-of-life (EoL) and the metal extraction post recycling of the respective e-waste.

The updated amended rules were introduced with an intent to focus and enhance recycling capabilities.

Further amendments to the e-waste (Management) rules 2023 defined the percentage of metals to be extracted from the collected e-waste in Metric ton and the compliance requirement needs the mentioned key metals like Mild steel, Copper, Aluminum and Gold to be extracted, post recycling of e-waste as per the percentage defined.

Further the Extended Producer Responsibility laws with respect to Plastic waste and Battery waste are also having clauses to ensure recyclable content being there as per the percentage defined and increasing Year on Year.

Panasonic India has two robust initiatives to ensure customer connect for e-waste and consumer awareness in compliance with the e-waste law.

- The "I Recycle" program already established by Panasonic India (PI), helps pass on the information to the existing customers who approach Panasonic Service centre for servicing requirement.
- The Panasonic Harit Umang program has been sensitizing the youth from past six years, engaging them on responsible and safe disposal of e- waste, plastic and battery waste to

ensure and enable scientific recycling for the future circular economy and making a GREEN IMPACT

Panasonic India also chairs the Sustainability and environment committee at the Industry association “Consumer Electronics and Appliances Manufacturers Association (CEAMA)”, where we undertake activities of analysis of current recycling activities in India as well as a long-term plan for waste problem solutions.

We are also actively engaged in different active associations including the Federation of Indian Chambers of Commerce and Industry (FICCI) to establish an even more efficient and robust recycling system and to submit industry comments to the Indian government for a better governance system.

■ Efforts in Latin America

In response to a growing trend in stricter environmental laws in Latin American countries, discussions on the establishment of recycling laws and actual enforcement are being conducted.

In Brazil, a sectoral agreement on home appliances was concluded in October 2019, and a Federal Decree specifying a system to collect and recycle household electrical and electronic equipment was enforced in January 2021. As one of the main members of a waste home appliance management body (ABREE), Panasonic collaborated in the establishment of a reverse logistics system (a system to collect used products), and promotes efficient collection and treatment of used products.

The target for 2023 was reached by collecting and treating 46.8 tons which represents 100% of tonnage goal in accordance with sectorial agreement. In 2024, the target was 90.5 tons, and it was fully accomplished by the ABREE association. For 2025, the target is 17% of the tons placed on the market. As of April 2025, 20.02k tons have been collected and treated, which represents 27% of achievement so far.

Other Countries in Latin America

Countries such as Peru, Colombia, Mexico, Chile, Ecuador, Panama, El Salvador, Nicaragua, and Costa Rica are moving toward global standards for e-waste management. Peru and Colombia have enacted detailed WEEE laws, while others like Chile are still developing regulations.

Industry-led programs and government-approved recycling plans are active in Mexico and Colombia. Costa Rica stands out with diverse initiatives public campaigns, urban mining, and circular economy projects promoting responsible e-waste handling.

We continue to support policy development through collaboration with governments, industry groups, and pilot recycling efforts.

Biodiversity Conservation

Ways of Thinking about Biodiversity

Our social lives and business activities are based on various benefit provided by the natural capital (NCP: Nature's contributions to people). It has been recognized that conservation of biodiversity is as important as measures for climate change and resource recycling and they are closely linked each other in establishing a society where humans and nature coexist in harmony which is a long-term vision of the Sustainable Development Goals (SDGs) and the United Nations Convention on Biological Diversity.

In December 2022, "the Kunming-Montreal Global Biodiversity Framework (GBF)" was agreed in the UN Biodiversity Conference (COP 15) held in Montreal.

Aiming to achieve the 2050 Vision for 'a world living in harmony with nature', the framework covers the 2030 mission, which aims to 'take urgent action to halt and reverse biodiversity loss.' The international targets to achieve a nature-positive world by 2030 are 'the GBF targets' and 23 action-oriented global targets were determined in the COP15.

As the biodiversity goal in our GREEN IMPACT PLAN 2024 (GIP2024), we set targets to reduce the impact from business activities on the ecosystem for its recovery, aiming at a nature positive world as a front runner.

Twenty-three targets designed to achieve the 2030 Nature Positive Initiative goals were announced at the Kunming-Montreal Global Biodiversity Framework (GBF).

As part of our biodiversity conservation under the GREEN IMPACT PLAN 2024+1 (GIP 2024+1), we will continue working on reducing the impact of business activities on the ecosystem and restoring it to a nature positive state.

Three Targets in GIP2024+1

Targets		SDGs
Sustainable procurement of raw materials	Promote sustainable procurement of wood and paper, etc.	12,13,15,17
Utilization of greenery in business sites (land use)	Utilize greenery in business sites, considering conservation of biodiversity	13,15,17
Products and services	Offer products and services that contribute to conservation of conservation	11,12,15,17

Promoting awareness in the Group and actions related to the TNFD

In fiscal 2025, we organized the Nature Positive Working Group under the Sustainable Management Promotion Consortium to promote greater understanding and awareness of biodiversity and the Nature Positive initiative. In August 2024, we organized a lecture featuring a specialist guest speaker, followed by a panel discussion with Group CTO Tatsuo Ogawa. In addition, monthly workshops are held to report on internal activities related to biodiversity and the Nature Positive initiative and to share the latest developments in the area with employees throughout the Group, including R&D divisions and various operating companies.

At the same time, a LEAP analysis of the Taskforce on Nature-related Financial Disclosures (TNFD) is being conducted, examining the contact points between business activities and natural capital, including biodiversity and water and analyzing various scenarios for dependency and influence and risk and opportunities. See [Page 45](#) for the TNFD.

The Green Impact Plan that is reviewed and revised every three years is equivalent to the Biodiversity Action Plan (BAP) under the Convention on Biological Diversity

Initiatives for Sustainable Procurement of Raw Materials

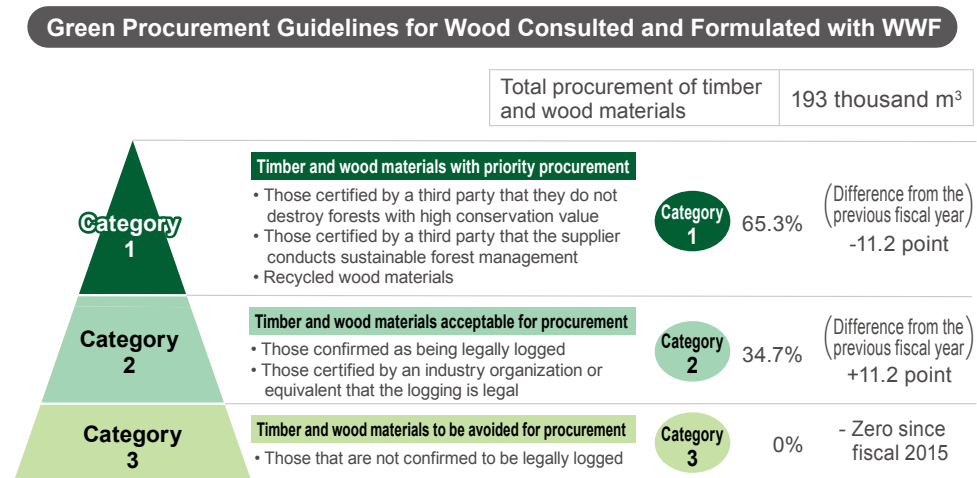
Firstly, we plan to include our consideration for biodiversity protection in Procurement Department's "Green Procurement Standards" to ensure that these practices are carried out across our whole supply chain.

In regard to procurement for wood, we discussed extensively with Worldwide Fund for Nature (WWF) Japan over our green procurement; and formulated the "Panasonic Group Green Procurement Guidelines for Wood" aiming for conservation of biodiversity and sustainable use of natural resources in 2010. Based on these guidelines, we conduct an annual survey on wood material procurement among our suppliers.

In fiscal 2022, we exchanged opinions about sustainable material procurement with WWF Japan. In the discussion with WWF Japan, we confirmed growing importance of environmental and social (human rights) considerations, in addition to importance of compliance with laws and regulations for our timber procurement. This discussion also gave us an opportunity to think about future measures.

■ Exclusion of timbers and wood materials whose regulatory compliance in their logging has not been confirmed (Category 3)

The survey results in fiscal 2025 are as follows.



☞ “Green Procurement Guidelines for Wood”

https://holdings.panasonic/content/dam/holdings/global/en/corporate/about/procurement/green/pdf/green_wood_E.pdf

☞ “Green Procurement Standard”

<https://holdings.panasonic/global/corporate/about/procurement/green.html>

☞ How to respond to the “Act on Promoting the Distribution and Use of Legally Harvested Wood and Wood Products” (called Clean Wood Law) (Japanese)

<https://www2.panasonic.biz/es/sumai/law/cleanwood/>

Activities for Land Use

Once an ecological network that connects greenery in our business divisions, neighboring woodlands and parks is formed, living things such as birds, butterflies, and dragonflies in each area can move around wider areas for flowers and water through the ecological networks, and their habitats are expanded. Green areas in our business divisions have a lot of potential to contribute to conserving biodiversity in that area. In particular, hardly any natural environments where wild animals can live and breed remain in urban areas. Therefore, even small areas of green in corporate premises can become a precious habitat of a variety of living things if they have indigenous vegetation and a watery environment.

■ Acquisition of Eco-Certification Based on Quantitative Evaluation from an external accredited body

Panasonic Corporation's Living Appliances and Solution Company's (LAS) Kusatsu site in Shiga Prefecture, obtained an eco-certificate from the Association for Business Innovation in harmony with Nature and Community (ABINC)¹¹ in March 2018, as a business site for its contribution to biodiversity. In the course of assessment, we received high ratings for how we are making green corridors to be suited to diversified living creatures by appropriately conserving the natural environment, keeping invasive non-native species under proper management by continuously monitoring to understand their status, and the active use of woodland nearby the factory, in liaison with external eco-related organizations and local people, such as the local public bodies and primary school students.

In the monitoring survey we have conducted since 2011, 840 species of flora and fauna were confirmed. At the same time, the survey result has indicated that the woodland is an important biotope in the area where urbanization is taking place, which contributes to the formation of local ecological networks. In addition, our continuing implementation of the environmental learning program on acorns for elementary school students was highly evaluated; and won an Award of Excellence in the 2nd ABINC award held in January 2020, as an ‘activity contributing to the biodiversity mainstreaming’.

Starting in October 2024, we have been conducting an academic study and joint research on biodiversity conservation in the Forest of Coexistence in collaboration with Kyoto University and Osaka Sangyo University. Presently, we are studying and researching the forest growth process to understand the impact over a wide area including the surrounding environment.

In December 2024, a research exchange was held between the Kyoto University Field Science Education and Research Center and Panasonic Holdings. At the meeting, we exchanged opinions on integrating Panasonic's technologies with knowledge and information in the field of ecology to further contribute to biodiversity and to discover research themes that will lead to new business developments.

We gave three presentations on our collaborative research on the Forest of Coexistence at the 72nd Annual Meeting of the Ecological Society of Japan held in March 2025. We are moving forward with activities that foster an understanding of ecosystems in the Sustainable Forest that serve as urban green space.

[Related link]

☞ <https://news.panasonic.com/jp/press/jn231012-1>

<External certifications and awards>

- Acquired three stars under the Shiga Biodiversity Action Certification Program (2018)^{*2}
- Acquired ABINC certification (March 2018); the first certification renewal (February 2021) and the second certification renewal (February 2024)
- Received an Award of Excellence in the 2nd ABINC Awards (January 2020)

*1 ABINC is a certification system by third-party evaluation on greenery improvement and management at business divisions based on the land use score (biodiversity quantitative assessment tool in environmental assessment) and Guidelines for Sustainable Business Sites developed by the Japan Business Initiative for Biodiversity (JBIB).

*2 Shiga Biodiversity Action Certification Program is the first system in Japan for rating wide range of activities conducted by business enterprises in the area of biodiversity conservation with 1 to 3 stars granted by governor.

<Participation in international activities 30by30 Alliance for Biodiversity>

In March 2022, we joined the 30by30 Alliance for Biodiversity which is a global efforts and initiated by Japan's Ministry of the Environment (MoE), to conserve at least 30% of own land as natural environmental area, and at least 30% of own ocean by 2030, as we believed our natural symbiosis woods 'Forest of Coexistence' would contribute to the 30by30.

In October 2023, our 'Forest of Coexistence' was officially certified as 'Nationally Certified Sustainably Managed Natural Sites' by the MoE. It is currently listed in the international database as an OECM^{(*)3}.

☑ **News release by the MoE on October 6, 2023.**
Certification Results for 'Natural symbiosis site'
(Shizen Kyosei Site) in the first half of fiscal 2024

<https://www.env.go.jp/press/111067.html>

☑ **International Database**
Explore the World's Protected Areas

<https://www.protectedplanet.net/country/JPN>

*3 OECM: Other Effective area-based Conservation Measure Areas other than national parks and other already protected areas that would contribute to biodiversity protection, such as shrine or temple woodlands, woodlands owned by companies or which form part of company premises, rural village zones, etc. Japan's 30by30 would include national parks and other protected areas.

☑ **Biodiversity Conservation Ecological Network Concept**

https://www.panasonic.com/global/about/sustainability/environment/ecology/kusatsu_factory.html



ABINC Certification



Three-star rating in Shiga Biodiversity Action Certification Program
SHIGA PREF. BIODIVERSITY



LAS's Forest of Coexistence

Initiatives for Products and Services

The Group develops and sells products and services that lead to biodiversity conservation and nature positive future.

For further details of products, please visit the following website.

☞ https://holdings.panasonic/jp/corporate/sustainability/environment/biodiversity.html#biodiversity_04

Conservation of Biodiversity through Collaboration with and Support for NGOs, NPOs and Venture Corporation

■ Introduction of MSC-ASC certified sustainable seafood at employee canteens

The Panasonic Group has been involved in marine protection activities^{*4} for some 20 years through collaboration with WWF Japan. Main activity at present is continual supply of MSC and ASC-certified^{*5} sustainable seafood^{*6} to



Cumulative total of sites offering the menu exceeded 50

employees' cafeterias that started for the first time in Japan at Panasonic headquarters in March 2018. For now, the situation remains difficult for the activity, e.g., some cafeterias had started serving sustainable seafood forced to stop serving the sustainable seafood due to the decreased number of employees using cafeterias as the number of employees working from home increased, and impact of price hike. As difficulties continued, sustainable



Fried oysters using Japan's first ASC-certified oysters from Togura in Minamisanriku, which the Group also supported.

seafood was introduced to the Panasonic Group sites this year, making an accumulated total of 57 sites. We are also promoting new initiatives such as providing MSC-certified clams to employees' cafeterias, starting with the Yellow Sea Ecoregion Support Project⁷. As for our continued support for other companies adoption of sustainable seafood into their cafeterias, the running total of the cafeterias of partner companies using sustainable seafood has exceeded 50, making more than 100 when combined with our group's accumulated total. In addition to corporate cafeterias, Yokohama City University COOP has obtained the MSCASC certification with the Panasonic Group's support and corporation, and started serving the sustainable seafood at the university cafeteria for the first time in Japan's university in 2022. Sustainable seafood is now creating a new trend and is expanding its market.

By expanding availability of sustainable seafood such as serving it at corporate cafeterias, conducting awareness-raising activities periodically and continuously for employees and the next generation about sustainable seafood and the IUU fishing issues⁸, and facilitating transformation of behaviors of our employees and the public at large as consumers through communication via media, and the like, we contribute to 'SDG 14: Life below Water' and promotes to make the topic of biodiversity mainstream.

<External awards>

Champion in the Initiative Category of the 1st Japan Sustainable Seafood Awards (November 2019)

*4 Including supports for the conservation of the tidal flats in Ariake Sea (2001 to 2006) the Yellow Sea Ecoregion (2007 to 2015), and the reconstruction of aquaculture industry in environmentally friendly manner at Minami Sanriku, Tohoku (2014 to current).

*5 MSC certification is certified by Marine Stewardship Council for sustainably and properly managed fisheries. ASC certification is certified by Aquaculture Stewardship Council for responsible fish farming to minimize environmental load on the environment and society.

*6 Seafood that has been certified sustainable production with MSC and ASC certification and managed under CoC certification⁹

*7 To conserve the nature of the Yellow Sea, a global diversity treasure, WWF Japan launched the "Yellow Sea Ecoregion Conservation Program" in April 2002, and in September 2007 the "Yellow Sea Ecoregion Support Project" started with the support of then Panasonic Corporation.

*8 IUU fishing issues: Fishing that is illegal, unreported and unregulated. It is one of the international issues that threaten the effectiveness of resources management.

*9 CoC is the acronym for Chain of Custody. Certification on securing management and traceability in processing, distribution, and marketing.

☞ References on sustainable seafood

<https://news.panasonic.com/jp/topics/204140.html>

☞ "Choose to protect ocean!" Spreading sustainable seafood...

https://holdings.panasonic/global/corporate/sustainability/citizenship/sustainable_seafood.html

Tackling social issues through collaboration with venture businesses

Panasonic Holdings Corporation (PHD) and SEA VEGETABLE COMPANY have concluded a joint demonstration agreement aimed at resolving social issues such as biodiversity conservation, the food supply problem and CO₂ reduction through seaweed cultivation. This project combines PHD's robotics and IoT technologies with the seaweed cultivation technology at SEA VEGETABLE for a collaborative review of its feasibility, aimed at reducing

the environmental impact and stabilizing food supplies. Starting from November 26, 2024, PHD began offering seaweed cultivated by SEA VEGETABLE at their employee cafeteria. PHD is also engaging in activities designed to communicate to employees the current state of biodiversity and the problems found in the marine industry, as well as promoting behavioral changes and a greater understanding of the Nature Positive initiative.



Seaweed cultivation by Sea Vegetable



Serving cultivated seaweed to employees' cafeterias

■ Promotion of activities for conservation of biodiversity around the world through NGOs and NPOs

Continuing protecting satoyama and rivers through citizen networks

The Panasonic Group companies located in Japan, and their labor unions and retiree association conduct a variety of environmental protection activities as Panasonic ECO RELAY Japan (PERJ) in a one team.

Since its foundation in October 2010, PERJ has been working with a variety of stakeholders¹⁵



Activities at Yodo River



Unitopia Sasayama Satoyama Revitalization Activity

to conserve local environments through efforts such as Hirakata City Hotani Satoyama Conservation Activity; Tanba Sasayama City Unitopia Sasayama Satoyama Revitalization Activity; Kadoma City Eco Network Activity; and Osaka City Yodo River and Johoku Wand^{*15} Conservation Activity. During these years, we have received the following awards in recognition of our contribution to nurturing the next generation to act for the environment under collaborations with local companies, universities, and citizen groups. In our work to contribute to a sustainable global environment and society, we will continue activities that lead to the conservation of biodiversity and satoyama focusing on 'forests', 'greenery areas' and 'water'.

<External awards>

- Hirakata City Environment Award (February 2018)
- Biodiversity Action Grand Prize (December 2018)
- Kadoma City Environment Award (February 2019)
- Osaka City Environment Award (February 2020)

In October 2024, Japan's Ministry of the Environment certified the Unitopia Sasayama Satoyama Revitalization Area, which volunteers have been working to restore since 2012, as the "Nationally Certified Sustainably Managed Natural Sites." (This is the second such designation the Panasonic Group has received, following certification of the Sustainable Forest on the Kusatsu site.) The Woodland Revitalization Activity is managed for biodiversity conservation, utilizing the woodland environment located inside the corporate recreation area. The principal features of the area that led to certification are the presence of diverse biota, including rare species, its use as a venue for environmental education and installation of a monitoring system.

🔗 **News article on certification of the "Nationally Certified Sustainably Managed Natural Sites."**

<https://news.panasonic.com/jp/topics/205980>

We will continue working together with local communities on activities that lead to the conservation of biodiversity and satoyama with a focus on forests, greenery areas and water, as well as nature education activities, that contribute to the creation of a sustainable global environment and social development.

^{*15} Wand is terrain just like a small pond surrounded by river structures, although Wand is connected to a mainstream of the river. Wand provides stable habitats for fish and other aquatic life, and at the same time, it is breeding grounds for a variety of plants.

^{*16} Collaborating with numerous stakeholders, including NPOs, citizen groups, universities, administrative bodies, local governments, research institutes, corporations, and local farmers.

🔗 **Panasonic ECO RELAY Japan (PERJ)**

<https://www.panasonic.com/jp/corporate/sustainability/citizenship/environment/perj.html>

🔗 **Unitopia Sasayama Satoyama Revitalization Plan**

<https://unitopia-sasayama.pgu.or.jp/ecorelay/>

🔗 **One of the Panasonic Group's corporate citizen activities (environment-related social contribution activities by Panasonic business sites and employees across the world).**

<https://panasonic.co.jp/citizenship/activity/environment/>

Participation in Biodiversity Initiatives

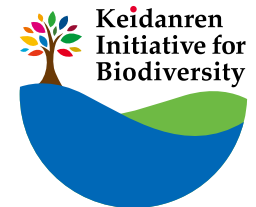
The Panasonic Group participates in biodiversity initiatives and related industry organizations, as shown below. This is to accurately understand biodiversity policies in Japan and global trends concerning biodiversity, such as 23 targets for 2030 of the Kunming-Montreal Global Biodiversity Framework (GBF) adopted at COP15 (UN Biodiversity Conference), TNFD, and SBTN through study meetings. We feed these domestic and global policies back into Panasonic Group businesses and assess opportunities and risks.

<Membership and Participation>

- TNFD Forum member
- Keidanren Committee on Nature Conservation
- Japan Business Initiative for Biodiversity (JBIB)
- Biodiversity Conservation Committee of the Japan Association of Industries and Environment
- Biodiversity Working Group of four Electrical and Electronic Industry Associations^{*17}

Additionally, Panasonic Holdings Corporation has been a member of the Clean Ocean Material Alliance (CLOMA) to accelerate innovation in solving marine plastic waste issues.

^{*17} Four industry associations: The Japan Electrical Manufacturers' Association (JEMA), Japan Electronics and Information Technology Industries Association (JEITA), Communications and Information Network Association of Japan (CIAJ), and Japan Business Machine and Information System Industries Association (JBMIA).



Keidanren Initiative for
Biodiversity logo mark

Water Resource Conservation

Ways of Thinking about Water Resource Conservation

It is said that available fresh water is only about 0.01% of the Earth's total water resources. We understand that the water crisis is one of the global risks, considering further increase in water consumption because of economic growth and population increases in near future.

As risks of extreme water shortages is becoming higher as one of social issues, the Panasonic Group has been working to conserve water resources both in its products and production activities, in order to fulfill its social responsibility and to reduce risks in the management. Our Environmental Policy (see [page 14](#)) sets that we make efforts to conserve water resources by using water efficiently and preventing water pollution. We are working hard to reduce water usage in our business activities and through our products and services by setting water resource conservation in Our GREEN IMPACT PLAN 2024+1 as one of the continuing efforts.

For promoting these activities, the Panasonic Group have established a structure for the promotion of environmental management, including water management (see [page 29](#)). We are continually working to develop our environmental sustainability management by implementing the PCDA management cycle. We have also created an environmental risk management organization to identify environmental risks each fiscal year and continue to reduce them. This organization promotes risk management across the Group and is working on ways to implement rapid action when an environmental risk emerges (see [Page 75](#)).

LEAP analysis of water resources based on the TNFD Framework

Although our Group had already implemented a water risk assessment by fiscal 2018, we have started to reassess the risks in view of evolving assessment standards and changes in the business environment. We are presently working on identifying and assessing risks related to water resources and their impact, in compliance with the Taskforce on Nature-related Financial Disclosures (TNFD) Framework. As part of this effort, we are conducting systematic risk assessment based on the LEAP Approach* at all of our manufacturing sites.

The first phase of the process is "Locate," which defines the relationship between our site's location and natural capital. Specifically, we use the water risk assessment tool Aqueduct from Water Resources Institute (WRI) and Water Risk Filter from the World Wide Fund for Nature (WWF) to assess the position of each of our manufacturing site vis-à-vis the natural environment and have conducted assessments of water stress and water quality contamination

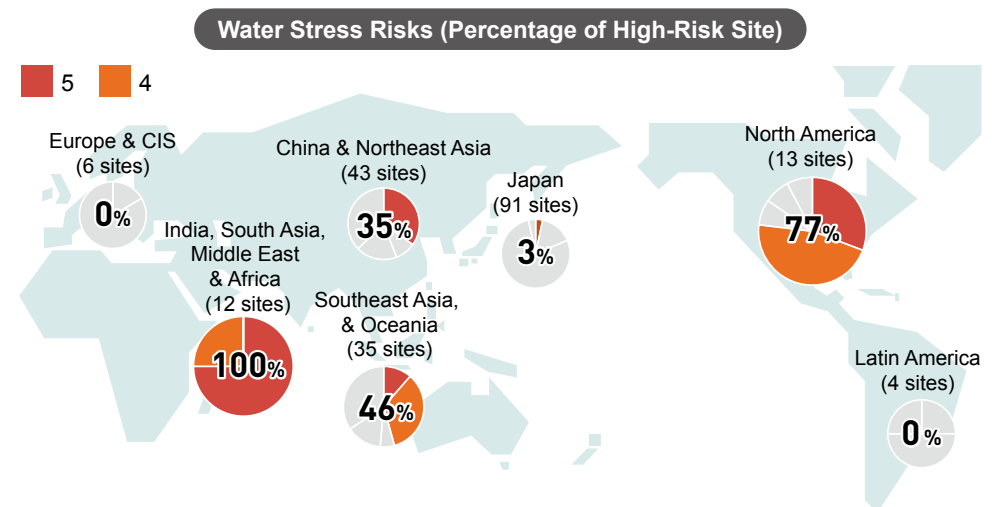
risks. As a result, we have been able to identify sites where water resources face high levels of physical risk. On some of these high-risk sites, aggressive action is already underway to reduce the physical risks. These cases are presented on our website.

In the subsequent "Evaluate" phase, a detailed review is conducted of sites that are identified as having a high dependence on water collection (type, usage, water withdrawal, etc.) and the impact caused by effluent discharge (discharge method, discharge destination, proximity to protected areas, etc.). This study enables us to evaluate each site's dependence on water resources and its impact on the natural environment. The "Assess" phase is designed to identify clearly the projected risks and opportunities based on the assessment results. At the "Prepare" phase, we decide how to apply our findings to defining effective targets and developing countermeasures.

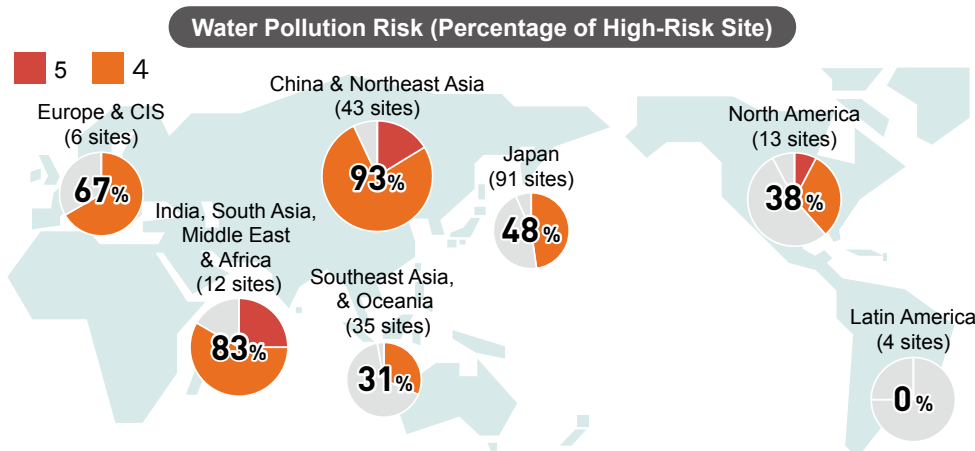
* LEAP approach

TNFD adopted the LEAP approach to comprehensively assess nature-related risks and opportunities.

The LEAP approach comprises four phases: Locate the company's interfaces with nature; Evaluate its dependencies and impacts on nature; Assess its nature-related risks and opportunities; and Prepare and report on material nature-related issues.



*Excluding the factories within Panasonic Automotive Systems Corporation, which was deconsolidated in December 2024



*Excluding the factories within Panasonic Automotive Systems Corporation, which was deconsolidated in December 2024

Water Resource Conservation through Products

By thoroughly analyzing the use of water through our products, we have developed functionalities that allow a considerable amount of water conservation by utilizing water at a maximum level through improvement of water flow control and cyclic use. We continue to develop products with low water usage.

Example of water-saving products are introduced in the following website.

<https://www.panasonic.com/global/corporate/sustainability/eco/water.html>

Initiatives for Water Resource Conservation through Production Activities

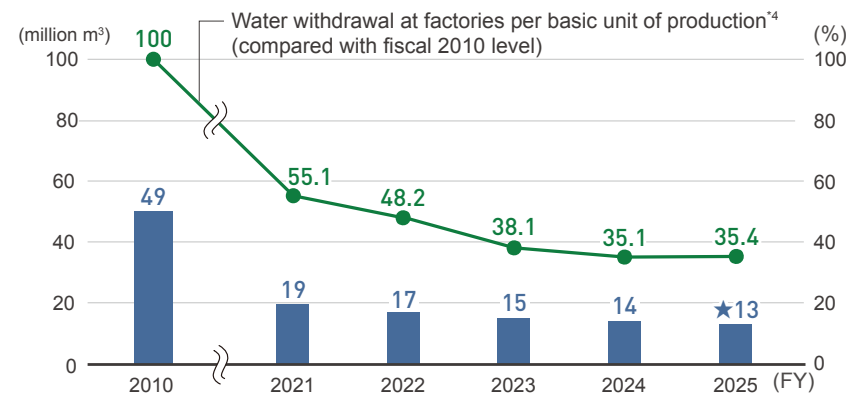
By collecting and reusing wastewater from our manufacturing processes and air conditioning systems, the Panasonic Group has been reducing the amount of makeup water used and wastewater effluent. Through these activities, we reduce environmental loads on water resources due to the intake and effluent of water in production activities. As many regions around the world are threatened by water shortages, the Panasonic Group has been conducting production activities, balancing water resource conservation in focused regions. The amount of water withdrawal¹ at factories in fiscal 2025 resulted in 13.49 million m³, which is reduced by 2.7% versus the fiscal 2024. The water withdrawal at our factories per basic unit of production² deteriorated year-on-year due to the structural reform. Our use of recycled water³ in fiscal 2025 was 1.4 million m³, accounting for 10.4% of the total amount of water withdrawal. The amount of discharged water in fiscal 2023, 2024 and 2025 resulted in 11.78 million m³, 10.60 million m³, 10.45 million m³ respectively.

*1 Change from "Water consumption" to "Water withdrawal" in reference to GRI standards

*2 Water withdrawal at factories per basic unit of production = Water withdrawal at factories/Production volume.

*3 The calculation excludes the water circulating for a single purpose (e.g., water in a cooling tower).

Water Withdrawal in Production Activities and Water Withdrawal Per Basic Unit



*4 Then-SANYO Electric and Panasonic Liquid Crystal Display not included in fiscal 2010

FY2025 Breakdown of Water Use (by region)

(10 thousand m³)

Region	Water Withdrawal				Discharged			Consumption
	Municipal water/ industrial water	Ground-water	Rivers/ lakes		Sewer systems	Water-ways		
Japan	740	290	451	0	629	151	478	111
China & Northeast Asia	276	275	1	0	199	166	32	77
South East Asia, & Oceania	245	221	24	0	158	97	60	87
North America & Latin America	53	38	14	0	44	41	3	9
Europe & CIS	9	8	1	0	7	7	0	1
India, South Asia, Middle East & Africa	26	2	24	0	8	8	0	18
Total	1,349	834	514	0	1,045	471	574	304

Panasonic Industry Co., Ltd. (52 sites), uses the highest amount of water in all operating companies in the Panasonic Group. The company managed to achieve a year-on-year decrease of 1.7% in water withdrawal (5.32 million m³) in fiscal 2025, thanks to their focused efforts to reduce water withdrawal. The achievement rate for reducing the amount of water withdrawal per basic unit by using recycled water in factories, etc., was 103%.

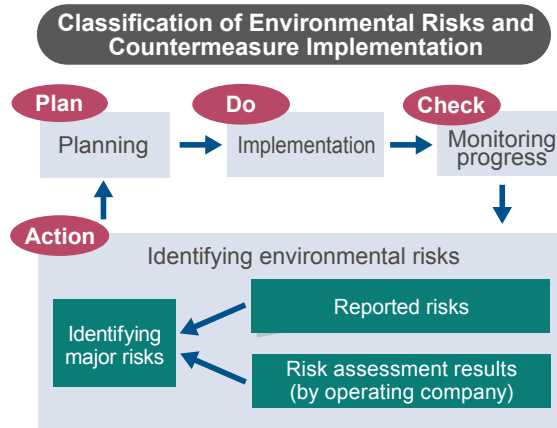
The Panasonic Group will continue our efforts to conserve water resources.

Pollution

Environmental Risk Management

Groupwide Systems to Manage Environmental Risks

As a tool to continuously reduce environmental risks, Panasonic Group has established an Environmental Risk Management System specific to each operating company. In accordance with the basic risk management policy for all Panasonic group operating companies (see [page 141](#)), we promote identification of environmental risks and group-wide risk management each year, and ensuring quick responses to reported environmental risks.



To identify environmental risks and implement the management system, environmental risks are identified for each operating company and for each region in the world each year. From these risks, environmental risks on a Panasonic group-wide level are selected. The risks that show a high level of frequency or seriously impact business management are designated as major risks and prioritized in planning and executing risk reducing measures. These measures are implemented for each major risk, and progress is monitored and followed up on a quarterly basis in the PDCA cycle.

When an environmental risk is found, the relevant operating company, related job functions, and local companies collaborate to promptly implement emergency measures and recurrence prevention measures adapted to the risk level. Also, the management flow in case of risk discovery is standardized to prevent the occurrence of secondary risks as a result of confusion.

Environmental Compliance Management at Factories

Panasonic Group manages environmental systems in full compliance with laws and regulations. We regularly measure emissions of gas, wastewater, noise, odor, etc., and introduce preventative measures for cases that may lead to serious violations. Furthermore, key human resources are developed for information sharing among the operating companies/business divisions, environment-related job functions, and local companies, to ensure exhaustive

compliance with legislation related to factory environment management in respective countries where our manufacturing sites are located. Specifically, activities to share information as well as specialized training are conducted for factory management officers in charge of the management of chemical substances, waste, wastewater, and exhaust gas, either by country or by region in Japan, Europe, China, and Southeast Asia. Field surveys on laws and regulations using checklists were conducted on a global scale to confirm comprehensive implementation of environmental compliance, and we also conducted verification of the effectiveness of various measures.

As a result of these measures, there were no violations of environment-related regulations across the world in fiscal 2025. We continue our efforts for thorough legal compliance and the prevention of any recurrence.

Case of Violations of Laws and Ordinances (e.g. excess of the standard legal level) in Fiscal 2025

Region	Environmental pollution					Other	Total
	Air	Water quality	Noise	Odor	Waste	Permission / Approval	
Global (including Japan)	0	0	0	0	0	0	0
(Japan)	(0)	(0)	(0)	(0)	(0)	(0)	(0)

Compliance with Environmental Regulations Relating to Products

We manage compliance with regulations relating to our products through a quality management system. Compliance with regulations is ensured with our Products Assessment System which incorporates environmental performance targets such as customer demands for environmental performance, the energy efficiency labeling program, and third-party certification systems, as well as evaluation of compliance with regulations on chemical substance management, energy efficiency, 3R, and recycling, to (1) set up overview for achieving targets at the product planning stage, (2) define concrete targets at the design planning stage, and confirm compliance at the design stage, (3) conduct interim assessment at the design completion stage, and (4) conduct final assessment at the mass production decision-making stage. In compliance with the RoHS regulations on 10 hazardous chemical substances, regular acceptance inspections are being conducted for purchased parts and goods and our suppliers are audited under our environmental quality assurance system. These are designed in cooperation with our suppliers

to improve the management of chemical substances in our products. However, we analyzing the factors that lead past violations related to the restricted substances in our products in a few years, the restricted substance content was derived from an upper stream supplier (a supplier in higher-tier) who has not directly contacted with Panasonic Group in the supply chain. Due to the difficulty of clearly understanding the state of quality control at suppliers in higher-tier, we believe strengthening the quality control system (audit system and training of the suppliers in higher-tier) at a supplier who directly contracted with the Group (Primary suppliers) is important to eliminate such violations. Therefore, our Quality, Environment, and Procurement Divisions will work to ensure further product compliance management and take recurrence measures, taking lead in collaboration with other relevant divisions for providing support to our primary suppliers.

Measures Against Soil and Groundwater Contamination

In the latter half of the 1980s, soil and groundwater contamination due to chlorinated organic solvents was detected at some Panasonic group sites. In response, we have conducted anticontamination activities across the Group. Specifically in 1991 we created the Manual for Preventing Contamination of Soil and Groundwater and began conducting necessary surveys and measures. In 1995 we discontinued the use of chlorinated organic solvents, and in 1999 created Guidelines on the Prevention of Environmental Pollution to ensure there would be no recurrence of similar problems at our sites. In fiscal 2003 we began enhancing our surveys and measures to comply with relevant laws and regulations, including the Soil Contamination Countermeasures Act, which was enforced in Japan in 2003, and in fiscal 2004 started implementing measures to place all our bases across the globe under management supervision with regard to soil and groundwater.

Specifically, we conduct onsite inspections and interviews at the bases, in addition to surveying their use of volatile organic compounds (VOCs) and heavy metals. Furthermore, we implement surface soil surveys within the premises. For the sites where contamination was detected beyond the regulatory pollution standards, we conduct detailed borehole surveys to identify the boundaries of the contaminated areas and take remedial measures.

As a result of these efforts, we were able to place all our bases under management supervision in 2008. Furthermore, in fiscal 2011, the management supervision scheme was purpose-specifically reorganized and reinforced to establish a new management supervision scheme. With the highest priority given to preventing dispersion of pollution beyond our premises, this new scheme is implemented across all operating sites to further improve the level of measures against contamination.

Soil and Groundwater Risk Management Policy

Conditions subject to management supervision	Procedure	
Pollution dispersion prevention beyond Panasonic premises	1. Conduct historical surveys 2. Determine and install monitoring wells at the premises' borders 3. Analyze groundwater at the borders 4. Check possibility of pollution from external sources 5. Report to management department	6. Determine the external pollution dispersion prevention methods 7. Install the external pollution dispersion prevention methods 8. Install assessment wells 9. Begin assessments (monitoring)
Thorough pollution source elimination	10. Conduct brief status check 11-1. Horizontal direction detailed analysis 11-2. Vertical direction detailed analysis 12. Determine the magnitude of pollution 13. Discuss the areas and methods of purification	14. Conduct purification and install pollution dispersion prevention measures 15. Monitor pollution source (groundwater) after purification 16. Report purification completion to management department

Soil and Groundwater Pollution Surveys and Remedial Measures for Fiscal 2025

Region	Number of sites that completed remedial measures	Number of sites currently taking remedial measures
Global (including Japan)	2	38
Japan	(1)	(34)

Measures Against Air Pollution

Panasonic Group is also working on responses to air pollution. Besides the efforts making in factories as matters of course, we are working as a company to comply with the Act Concerning Special Measures for Total Emission Reduction of Nitrogen Oxides and Particulate Matter from Automobiles in Specified Areas (Act No. 70 of 1992), which regulates nitrogen oxides (NOx) and particulate matters (PM) emitted from company cars owned and/or managed by Panasonic Group. The company cars owned and/or managed by Panasonic Group business sites in Japan are centrally managed on the group-wide vehicle management system.

Annually required reports are submitted through the vehicle management system. Also each business site undertakes thorough regular vehicle checkup and fuel economy management on these cars, as well as taking the initiative in reducing air pollution, such as by advising employees on eco-driving techniques and hosting related workshops, and promoting introducing hybrid cars.

Initiatives for PCB Pollution

Our initiatives for PCB pollution are introduced on the following website.

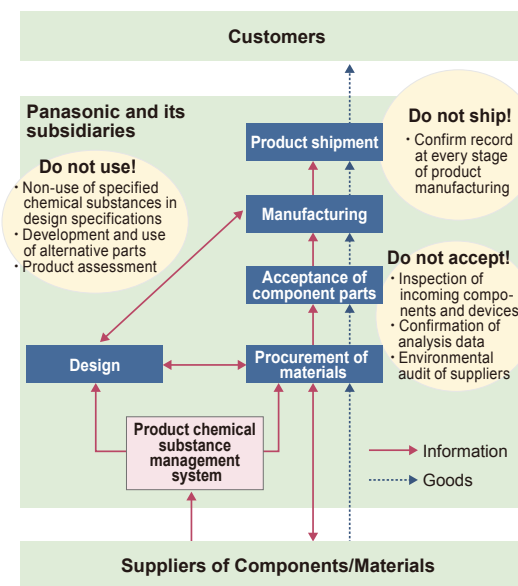
<https://www.panasonic.com/global/corporate/sustainability/eco/governance/risk.html>

Chemical Substance Management

Approaches to Reducing the Environmental Impact of Chemical Substances

In order to prevent contents of hazardous substances prohibited under the EU RoHS Directive^{*1}, and the like in Panasonic Group's products, it is important not only to pay attention to the contents at the stage of product design, but also to ensure that specified substances are not contained in products to purchase. Therefore, the Panasonic Group has rolled out the "Do not accept! Do not use! Do not ship!" campaign throughout the each production process from designing to shipment inspection in production activities at business sites across the world since October 2005. Specifically, as for the stage of inspection for incoming components, we have established a mechanism to check and analyze whether specified chemical substances are included by introducing an analyzer. In addition, we have supported to establish a Product Chemical Substances Management Structure, by periodically conducting environmental audits for suppliers of components/materials which may have high risks of containing specified chemical substances.

Specified chemical substance management system



Specified Chemical Substance Management System

Meanwhile, as represented by the enforcement of the REACH regulation^{*2} in the European Union, the world implemented measures toward the goals agreed at the World Summit on Sustainable Development (WSSD) held in 2002, which is to produce and use all chemical substances in a manner that minimizes their impact on human health and the environment by 2020. Although the subsequent discussion was delayed as the conference could not be held due to the COVID-19 pandemic, in the fifth International Conference on Chemicals Management (ICCM5) held in Germany September 2023, a new international framework that succeeds the activities up to 2020 was discussed; concerning appropriate chemical management, a new international framework for voluntary and diverse actors to be involved was formulated. Panasonic Group has been supporting the precautionary approach proposed in the Rio Declaration at the Earth Summit in

1992, and has continued its efforts for appropriate chemical management on a global scale even after 2020 that is the final target year of the WSSD framework. Furthermore, in order to continue implementation of product manufacturing in line with our basic policy of reducing the use of chemical substances that might adversely affect human health and the environment throughout their lifecycles, we determined chemical management (see page 16) as one of our continuing issues, and we are constantly working to reduce environmental loads of the chemicals used in our business activities and products. As for concrete activities, we have worked to comply with relevant regulations such as EU RoHS as a matter of course. In addition, we have worked to reduce adverse environmental impact originated by our group products as much as possible by (1) trying to understand hazardous substances contained in our products, (2) evaluating these substances on their environmental impact, and (3) voluntarily reducing or discontinuing their use in case of any environmental risks of the substances. We will continue to implement appropriate chemical management of such chemical substances while monitoring global environmental trends.

*1 Directive on the Restriction of the use of certain Hazardous Substances in electrical and electronic equipment
The RoHS Directive currently restricts use of the following ten substances beyond the specified concentrations shown in parentheses:

lead (0.1%), cadmium (0.01%), mercury (0.1%), hexavalent chromium (0.1%), polybrominated biphenyls and polybrominated diphenyl ethers (0.1%), four phthalates (DEHP, BBP, DBP, and DIBP) (0.1%).

However, the RoHS Directive allows exemptions from its restrictions for a limited time if substitution is technologically or scientifically impossible. Exemptions stipulate specific restrictions in details on the use, concentration limit, and time frame for each substance.

<Exemption examples>

Lead: Glass, ceramics, and high-temperature soldering used in electronic components.

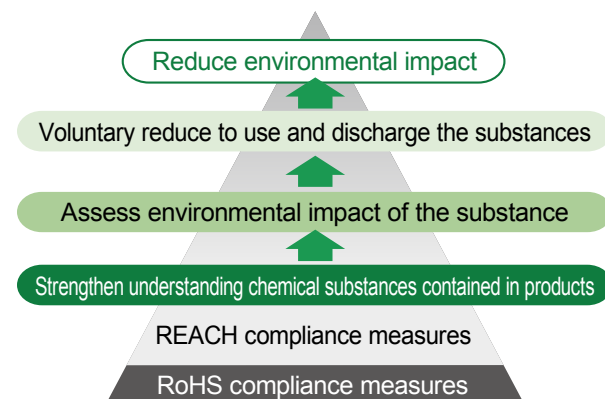
Mercury: Cold-cathode tubes used in LCD backlighting and fluorescent lighting.

Note that vehicles and batteries are not subject to the restrictions under the EU RoHS Directive.

The EU End of Life Vehicles Directive details restrictions for vehicles and the EU Battery Directive (amended and promulgated as EU Battery Regulation in July 2023) details restrictions for batteries.

*2 Regulations on the registration, evaluation, authorization, and restriction of chemical substances.

Process to Reduce the Environmental Impact of Chemical Substances



In order to definitely implement such activities described above, we issued our Chemical Substances Management Rank Guidelines that specifies prohibited chemical substances and management substances concerning products and activities at factories. We request to take actions to the chemical substances in accordance with the guidelines, not only to Companies in the Panasonic Group, but also to our suppliers. In fiscal 2013, we added Level 3 of prohibited substances to the category of the Chemical Substances Management Rank Guidelines (For Products). We not only consider nonuse of the prohibited substances, or the substances to be prohibited under laws and regulations, but we also consider prohibiting concerned substances that may adversely affect human health and the environment in the future. Further, we are striving to comply with relevant laws and regulations, and mitigate effects of toxic substances on human health and the environment by increasing the number of globally prohibited substances (Level 1) beyond boundaries of countries subject to the applicable laws and regulations from 21 substances/groups in fiscal 2015 to 30 substances/groups in fiscal 2024.

The Chemical Substances Management Rank Guidelines (For Products) and relevant documents, which includes clear description of prohibited substances and management substances, is available in PDF file for your downloaded from the following website. (Green Procurement).

📄 **Green Procurement (Download of Chemical Substances Management Rank Guidelines (For Products))** in PDF file

<https://holdings.panasonic/global/corporate/about/procurement/green.html>

Chemical Substances Management Rank Guidelines (For Products)

Rank	Definition
Prohibit	Level 1 (1) A substance contained in products that is prohibited by existing laws and regulations; or a substance where the upper limit of concentration is specified. (2) A substance that will be prohibited in products by laws and regulations or where the upper limit of concentration will be specified within one year after the revision date of this Guidelines. Note that there is a case that a substance is specified as the Level 1 prohibited substance more than 1 year before the enforcement date, because of the enforcement dates of the law and the Rank Guidelines.
	Level 2 Substances other than those specified as Level 1 and to which either of the following criteria applies: (1) Substances to be prohibited in products after a certain period by a treaty, law, or regulation. (2) Substances that are prohibited in products by the Panasonic Group prior to the effective period specified by a treaty, law, or regulation. (3) Substances whose use is voluntarily restricted by the Panasonic Group.
	Level 3 Any substance other than those specified as a Level 1 or Level 2 Prohibited Substance that is under review for prohibition by laws, regulations, etc., and the clarification of substitution-related issues as well as the timing for prohibition will be reviewed by the Panasonic Group in light of future legislation trends.
Manage	Substances whose actual use in products needs to be understood and for which consideration needs to be given to human health, safety and hygiene, adequate treatment, etc. The intentional use of these substances is not restricted, but their use and contained concentration must be monitored.

Note: the laws, regulations and the substances subject to the above table are chemical substances specified as Class I Specified Chemical Substances under the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc., the EU RoHS Directive, Annex XVII of the EU REACH Regulation, etc. For more details, see the chapter 6 'Specified Managed Substances' in the Chemical Substances Management Rank Guidelines (For Products).

As for the hazardous substances whose manufacturing is prohibited under the Japan's Industrial Safety and Health Act, they are managed in accordance with the Specified Managed Substances in the Chemical Substances Management Rank Guidelines (For Factories)

Chemical Substances Management Rank Guidelines (For Factories)

Rank	Definition
Prohibit	Use of the following substances should be immediately discontinued: Carcinogens for humans Ozone depleting substances Substances whose use is prohibited by Panasonic Chemical substances designated as Class I Specified Chemical Substances by the Japanese Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. Substances whose manufacture is prohibited by the Japanese Industrial Safety and Health Act Substances whose manufacture and use are prohibited by international treaties
Reduce	Substances whose use, release and transfer should be identified and reduced. Substances other than prohibited substances that might pose risks to human health and the environment.

Note: Covered legislation include: PRTR Act (chemical substances), environmental criteria under the Basic Environment Act; the Industrial Safety and Health Act; and the Stockholm Convention. For more details, see the contents on The Aim of Establishing the Chemical Substances Management Rank Guidelines (For Factories) in the Chemical Substances Management Rank Guidelines (For Factories).

History of Panasonic Group's Initiatives to Reduce the Environmental Impact of Chemical Substances

	1989	1992	1996	2002	2004	2006	2007	2010	2015	2020
Social trends	The Montreal Protocol entered into force	Earth Summit in Rio de Janeiro— Agenda 21	Discontinuance of the use of specified chlorofluorocarbons by industrialized countries	WSSD in Johannesburg	Stockholm Convention entered into force	The RoHS Directive entered into force	The REACH Regulation entered into force			
Panasonic Group	1990	1995	2000	2005	2010	2015	2020			
All products		1992: Discontinued use of PVC resin in packaging materials		March 2003: Discontinued use of lead in solders globally*3	October 2005: Discontinued use of six RoHS substances globally*3	March 2009: Discontinued use of PVC in internal wiring of new products to be sold in Japan*3	March 2011: Discontinued use of PVC in internal wiring of new products globally*3	July 2018: Discontinuation of use of the four phthalates specified by the RoHS Directive in new products globally		July 2019: Elimination of use of PFOA globally
Individual products	1991: Released mercury-free manganese dry cells	1992: Released mercury-free alkali dry cells	1995: Discontinued use of CFC refrigerant in refrigerators globally	2002: Discontinued use of HCFC refrigerant in air conditioners (Japan)	2004: Refrigerators in Japan market became fluorocarbon-free (Japan)	2006: Released lead-free plasma display panels	2010: Released fluorocarbon-free freezers using CO2 refrigerant and compatible display cases	2013: Released air conditioners using new refrigerant R32 with low Global Warming Potential (GWP) (Japan)		2023: Released hot-water heater with heat pump that employs R290 natural refrigerant (on the European market)
Chemical substances used at factories		1996: Discontinued use of chlorinated organic solvents	1997: Began identification work for PRTR	1999: Launched the "33/50" reduction activity*4	2004 (Japan): Achieved Voluntary Action Plan Reduced release and transfer amount by 75% compared to fiscal 1999 level	2010 (Global): Achieved Voluntary Action Plan Reduced release and transfer amount of key-reduction target substances by 46% compared to fiscal 2006 level				

*3 Excluding applications where the quality such as safety cannot be ensured, or applications where the material is designated by laws and regulations.

*4 A reduction activity that promotes cutbacks in the use, release, and transfer of chemical substances by 33% in three years and by 50% in six years, compared to the fiscal 1999 level.

Management of Chemical Substances in Products

To minimize the environmental impact of chemical substances contained in products, we endeavor to identify chemical substances used in the components and materials of our products. In addition, for substances that are prohibited in products in major developed countries because of laws and regulations such as the European RoHS Directive, we manage the substances not to be used and/or contained in our products by designating them as prohibited substances except the substance for specific usage which is unavoidable to use its substitution. We will also conduct environmental impact assessments for the managed substances contained in our products. As for a substance whose impact on human health and/or the environment cannot be ignored, we plan to reduce or prohibit use of the substance.

■ Continuously updating information concerning chemical substance contents

The electrical and electric products The Panasonic Group manufactures and sells consist of various raw materials and components supplied through a long supply chain from material manufacturers to many component manufacturers.

To contribute to the achievement of the global targets set at the WSSD and the new framework adopted by ICCM5, it is important for us to disclose and communicate information on the chemical substances used in our products across the supply chain, for which we must promote cross-industrial initiatives to establish and disseminate an effective system.

The Panasonic Group is a member of the Joint Article Management Promotion consortium (JAMP). Approximately 500 major companies from various industries, such as chemical, component, and equipment manufacturers are also members of JAMP. We are proactively formulating, utilizing, and disseminating chemical substance management standards and systems through this organization.

The Panasonic Group has started up a product chemical substance management system in fiscal 2005. From July, 2009, our 10,000 suppliers of materials and components provided us the data on chemical substances contained in their products, using JAMP's data transmission formats (JAMP_AIS and JAP_MSDSplus).

Meanwhile, in Japan alone, the workload of upstream suppliers increased, as a number of hazardous substance inspections were carried out throughout the supply chain using own company format. Having recognized the issues obtained from the inspections, 'chemSHERPA' (a new scheme for information communication for chemical substances in products) was proposed in 2015. Because the format adopted for chemSHERPA complies with IEC62474, the international standard on material declaration (a declaration of specific information about composition of the materials and chemical substances in the product) for the electrical

and electronic machinery industry and their products, Panasonic Group agreed to use chemSHERPA format; and in January 2018, started full-scale use of chemSHERPA as a data gathering format. With the supply chain expanding to a global scale, it is particularly important for overseas suppliers to deepen their understanding on the handling of hazardous chemical substances. Therefore, our Group carried out education programs for persons in charge of chemical substance management and suppliers at more than 100 of our business sites in ten countries including China and other Asian countries. At the same time, the Panasonic Group completed conversion from JAMP format to chemSHERPA by June 2018.

🔗 **chemSHERPA website:** <https://chemsherpa.net/english>

(The JAMP website was merged into chemSHERPA on March 15, 2019)

While the Japanese automotive industry has been using the JAMA/JAPIA sheet⁵ to share information on chemicals used in products in the supply chain, IMDS⁶ is actually the defacto standard material data system used by the international automotive industry. With the backdrop of the Japanese automotive industry now shifting to IMDS from JAMA/JAPIA sheets, in October 2020 the Panasonic Group undertook a full data migration to IMDS for use in our automotive business. We held seminars to more than 200 suppliers and completed a successful data migration. This means that the Panasonic Group can now obtain data for the materials in the components received from our suppliers through IMDS into our management system for the chemical substances in our products, and, at the same time, we can deliver product chemical data to our customers. The system thus makes for easier material data communications throughout the supply chain.

Companies that procure electronic components need to fully understand the information on the substances contained in the components at the point of selection or usage in order to comply with the EU RoHS Directives and REACH regulations. Particularly, as the REACH Substances of Very High Concern (SVHC) List is updated every six months, those companies expect their suppliers to speedily provide information on the latest substance to the Panasonic Group. In order for the companies adopting our group's electric components to speedily and effectively understand the information on chemical substance contents, the Panasonic Group has published a table of RoHS and REACH compliance status on our website since November 2012. The table covers our RoHS Directive compliance information and the substances designated in the RoHS/REACH Confirmation Report for all our major generic electronic components.

⁵ The standard material data format in the Japan's automotive industry (standardized by the Japan Automobile Manufacturers Association and the Japan Auto Parts Industries Association).

⁶ International Material Data System: Material data system for automotive industry that is globally used.

🔗 **RoHS / REACH Confirmation Report for major generic electronic components**

<https://industrial.panasonic.com/ww/downloads/rohs-reach>

For products covered by the Act on the Promotion of Effective Utilization of Resources of Japan,

the Panasonic Group does not manufacture, import, or sell products that contain specified chemical substances which exceeds the limited value in non-exempt parts. For more details, see Information on the Content of Specified Chemical Substances below.

🔗 Information on the Content of Specified Chemical Substances (Japanese)

<https://holdings.panasonic.jp/corporate/sustainability/environment/chemical/jmoss.html>

In June 2015, the Act on Preventing Environmental Pollution of Mercury was enacted to implement measures agreed in the Minamata Convention on Mercury. The act requires manufacturers of products containing mercury to provide information such as labelling as manufacturers responsibility, so that such products are appropriately sorted and discharged when being disposed of. In order to communicate information concerning the mercury used in our products to customers, the Panasonic Group opened the webpage to provide our information based on the Act on the Preventing Environmental Pollution of Mercury, in May 2017.

🔗 PDF file of the Act on Preventing Environmental Pollution of Mercury

https://members.wto.org/crnattachments/2015/TBT/JPN/15_2560_00_e.pdf#search=%27Act+on+Preventing+Environmental+Pollution+of+Mercury%27

🔗 Information Based on the Act on Preventing Environmental Pollution of Mercury (Japanese)

<https://holdings.panasonic.jp/corporate/sustainability/environment/chemical/jmoss/mercury.html>

■ Assessing the Impact of Chemical Substances

Scientifically identifying the impact on human health and the environment of products containing chemical substances is vital to the development of products with low environmental impact. We are engaging in activities designed to assess the levels to which customers are exposed to substances of very high concern (SVHC), as well as safety during product usage 2011, we have assessed effects of ceramic fibers used in certain models of commercial microwave ovens. As part of our efforts to comply with the EU REACH regulation which requires preparing information for the safe use of products containing a certain amount of SVHC, we have created and publicized the safety assessment document. The exposure was considered to be nominal with little concern for any effects on human health. Furthermore, usage of ceramic fibers in our products was discontinued in December 2010.

🔗 Product Safety Assessment Report

https://holdings.panasonic/global/corporate/sustainability/pdf/RCF_Professional_microwave_oven.pdf

Other than described above, we continue to conduct a Product Safety Assessment as a part of our responses to the U.S. State of California's Proposition 65 that aims to protect the state's citizens from chemical substances. Specifically, we conducted an exposure assessment experiment on diisononyl phthalate (DINP) in 2016, and on a brominated flame retardant (TBBPA: Tetrabromobisphenol A) in 2017, then created an exposure assessment tool based on the experiment results. As a result of the assessment, we confirmed that our products do

not adversely affect users of our group products, i.e., customers. We are utilizing the exposure assessment tool to confirm product safety and to respond to relevant regulations.

■ Reduction in Use and Discharge of Chemical Substances

Fluorocarbons (CFC) used as refrigerants and insulating materials for freezers and air conditioners have properties that are known to cause ozone layer depletion and global warming. The Panasonic Group has developed a refrigerant based on CO₂ that has an extremely low effect on ozone depletion and global warming, and has been selling a home water heater that uses this low CO₂ refrigerant since 2001. Although this refrigerant can be used for heating up to a certain temperature, it cannot be used in large commercial refrigerators and freezers because of its low cooling efficiency. However, with the support of the New Energy and Industrial Technology Development Organization (NEDO), the Panasonic Group developed a refrigeration system that uses this CO₂ refrigerant, and has been delivering CFC-free freezers and refrigeration showcases that use this CO₂ refrigerant to supermarkets and convenience stores since 2010. Their use has expanded to warehouses and food factories, and we have shipped a total of 25,000 units in the domestic market. In addition, overseas shipments have increased significantly over the past few years, and we started production at our overseas sites last fiscal year to expand market opportunities globally.

For wall-mounted home air-conditioners (AC), we are promoting changing over from non-inverter types of AC, not only to more eco-friendly inverter types of AC with high energy-efficiency, but also to the AC with new refrigerant R32 whose Global Warming Potential (GWP) is low. In fiscal 2020, we introduced into Hong Kong's window air-conditioner market new models with the industry's first inverter system using the new R32 refrigerant, which has contributed to reduce environmental loads.

In addition, as measures against ozone depletion caused by HCFCs, a refrigerant called R410 that does not deplete the ozone layer was used in room air conditioners; however, this substance has an issue of its very high very high Global Warming Potential (GWP). Therefore, the Panasonic Group developed a model that uses a new refrigerant R32, which has a lower GWP and introduced it launched sales of the model in 2013. Furthermore, PT. The Panasonic Manufacturing Indonesia, which owns the factory for manufacturing room air conditioners in Indonesia, redesigned its production facility that used an ozone-depleting HCFC refrigerant R22 to one using R32 in fiscal 2015, and started supplying new R32-based air conditioners. Thereby, we contributed to the Indonesian government's initiative to eliminate the use of HCFCs.

In May 2023, we started manufacturing air-to-water heat pumps that utilizes R290 natural refrigerant (propane) for residential use, which has extremely low Global Warming Potential (GWP), as the first Japanese manufacture. In this fiscal year, we introduced new products, and lineup expansion of our product is underway.



OCU-CR2001MVF, a fluorocarbon-free freezer using CO₂ refrigerant



FPW-EV085, a display case compatible with a fluorocarbon-free freezer



Window air-conditioner unit with the new R32 refrigerant, CWHZ180YA



An air-to-water heat pump that utilizes R290 natural refrigerant for residential use

■ Restriction on Use of PVC Resin

Polyvinyl chloride (PVC) is a material of concerns to the generation of hazardous substances from inappropriate disposal, as well as the harmful effects of certain additive agents (phthalates) used to render PVC more pliable. In light of the significant potential for inappropriate disposal of the PVC resin used in the internal wiring of products, due mainly to difficulties associated with the sorting of this resin from used products, we have switched our new products launched from April 2011 to non-PVC.

📄 PDF List of Our PVC-free Products

https://holdings.panasonic.jp/corporate/sustainability/pdf/eco_pvclist2025.pdf

■ Restriction on Use of Phthalates

Phthalates are often used in PVC products, and the use of four phthalates^{*7} was restricted under the EU RoHS Directive from July 22, 2019. Panasonic Group classified these substances as Level 1 Prohibited Substances in our Chemical Substances Management Rank Guidelines Ver. 11 (for products) issued in July 2018, and delivery of materials and components contain the phthalates was prohibited from July 22, 2018. We have classified other phthalates as Level 3 Prohibited Substances, and are promoting their substitution. Since phthalates have a migration characteristic (where a substance from another article migrates through contact), materials may be contaminated by migration from production facilities as well as process equipment containing the four phthalates, which are specified as Level 1 Prohibited Substances. Accordingly, we also discussed introducing preventive measures against contamination through contact. To build a

structure for incoming inspection for phthalate, we amended the standard for incoming inspection and determined to conduct incoming inspections on supplied components with a high risk of containing phthalates, such as PVCs, elastomers and glues. We have already selected and assessed an analyzer for phthalates to use for these inspections, and installed the analyzer at our business division. The phthalates contained in Panasonic Group's products exported to Europe used to be as high as 10t. However, total elimination of the phthalates has been completed as of March 31, 2019.

*7 Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), and Diisobutyl phthalate (DIBP).

■ Organic fluorine compounds

It is believed that there are more than 10,000 types of organic fluorine compounds known as per- and polyfluoroalkyl substances (PFAS). Of these substances, per/polyfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA), perfluorohexane sulfonic acid (PFHxS) identified to be toxic, along with perfluorocarboxylic acids with a carbon chain length of 9 to 14 (C9-C14 PFCA) have been designated banned substances in the Chemical Substances Management Rank Guidelines (For Products), and their presence in Group products has been prohibited. In view of the deliberations under way in the EU, the United States and other countries regarding the regulation of other PFAS substances, we request our customers to disclose information that will allow us to assess the presence of such substances in Group products.

Activities to Reduce Negative Environmental Impact at Factories

The Panasonic Group has been working to minimize environmental impact by identifying the hazardous substances used in our products, assessing the impact of such use, and voluntarily discontinuing the use or reducing the release of such substances. Since 1999, we have been conducting the 33/50 Reduction Activity to materialize reduction by 33% in three years and by 50% in six years. In Japan, we started promoting reduction of amounts to use, release, and transfer specified chemical substances at our factories in fiscal 2000. Against the target in our voluntary action plan, a reduction by 50% from the fiscal 1999 level, we achieved a 75% reduction in the chemical substance use and a 62% reduction in the release and transfer in fiscal 2005. Since then, we have been continuing the activity, focusing on substances with particularly large amounts of release and transfer, setting a voluntary action target of reduction by 30% compared to the fiscal 2006 level. As a result, we achieved a 46% reduction in the amounts of release and transfer of specified key reduction-target substances across all factories worldwide in fiscal 2011.

Reflecting international trends in chemical substance management, our reduction measures have focused increasingly on particularly hazardous substances from fiscal 2011. Our Chemical Substances Management Rank Guidelines (for Factories) was established in 1999 as a guideline

to help manage the above chemical substance reduction activities. In Version 1, the guidelines specified a list of chemical substances to be managed, mainly focusing on carcinogenic substances. The guidelines were later updated to Version 2 in 2000 to include rules concerning the Japan PRTR Law. Version 3, introduced in 2004, additionally covered a list of substances specified by chemical substances management legislation in Japan. The chemical substances covered by Version 4 and later from 2009 are those specified in legislation on human health and environmental impact in Japan, the U.S., and Europe, as well as those specified under international treaties.

Under our Chemical Substances Management Rank Guidelines (For Factories), we have focused our management on select chemical substances that are hazardous to human health and the environment. Further, the Panasonic Group created a unique indicator, the Human Environmental Impact,^{*8} which is used globally in all our factories. Conventionally the chemical substances were managed by “quantity,” such as usage amount or emissions/release. However, such quantity-based management has a problem in that some highly hazardous substances do not become subject to reduction or management if the usage amount was small, and therefore would fall out of the scope of impact assessments. In addition, the toxicity criteria varied according to substance types and regional legislation, which made standardized management across the Group difficult. To address this issue, we worked together with experts from both within and outside the Group, reclassified chemical substances based on an overall assessment of their hazardousness, and specified a hazardousness factor for each classification.

Specifically, we set a hazard classification to each substance by utilizing carcinogen risk assessments issued by international organizations, together with publicly available hazard information and lists of ozone depleting substances.

For substances that have multiple hazard information items, the item ranked with the highest hazard risk is used for classification. We utilize this Panasonic Group internal indicator as the Human Environmental Impact indicator to promote efforts to ensure reduction of highly hazardous substances with greater environmental impacts, such as carcinogens and ozone depleting substances, according to the risk level. The Panasonic Group Chemical Substances Management Rank Guidelines is also available on the website on Panasonic Group Green Procurement activities to promote collaboration with our suppliers, encouraging them to offer materials that do not contain hazardous substances.

🔗 **Green Procurement (PDF file Download of Chemical Substances Management Rank Guidelines (For Factories))**

<https://holdings.panasonic/global/corporate/about/procurement/green.html>

*8 Human Environmental Impact = Hazardousness factor x Release and transfer amount

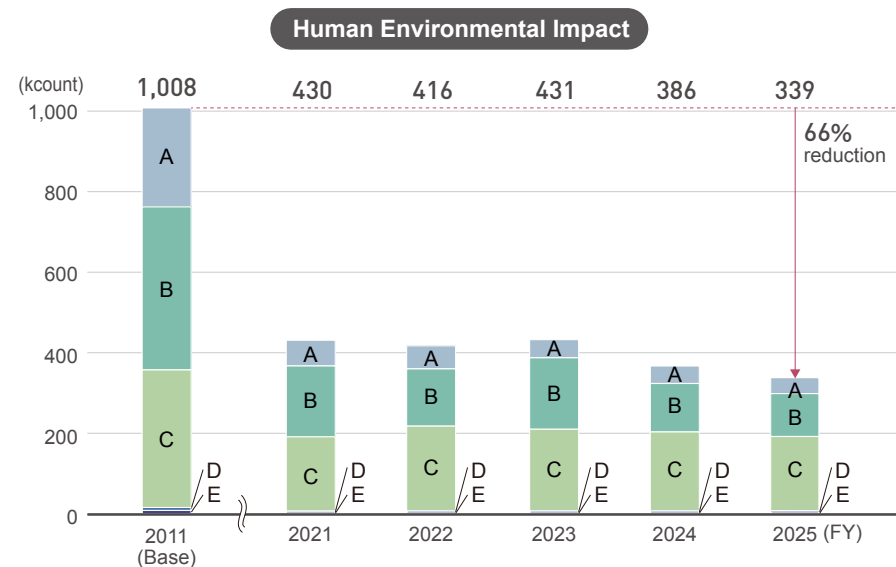
Further, we maintain our compliance in different countries by obtaining the latest information about the various chemical regulations enforced in each country through our overseas sites (former

regional headquarters) and local industrial organizations. As for the VOC regulations amended in China in 2020, we successfully completed compliance confirmation and replacement with compliant components in each business division thanks to cooperation from local suppliers.

Classification of Hazards

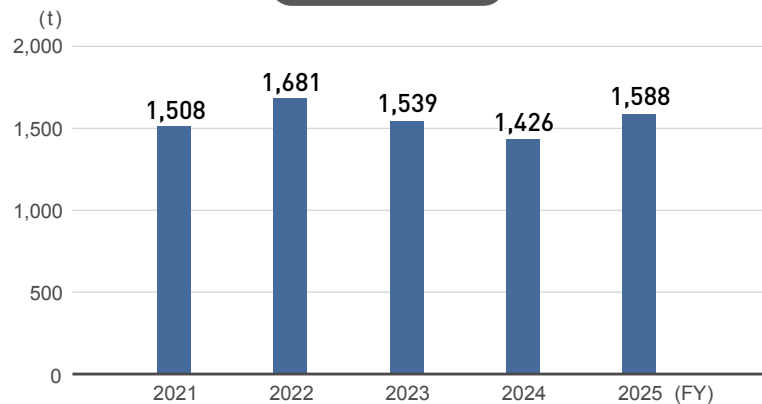
Classification	Hazards*9	Hazardousness factor
A	Carcinogenicity/Ozone layer depletion	x 10,000
B	Serious or direct impact	x 1,000
C	Medium impact	x 100
D	Small or indirect impact	x 10
E	Minor impact or not assessed	x 1

*9 In addition to carcinogenicity, hazards to human health include genetic mutation, reproductive toxicity, and acute toxicity. In addition to ozone depleting substances, hazards to/substances with impact on the environment include ecological toxicity, substances that impact global warming, and substances that generate photochemical oxidants.



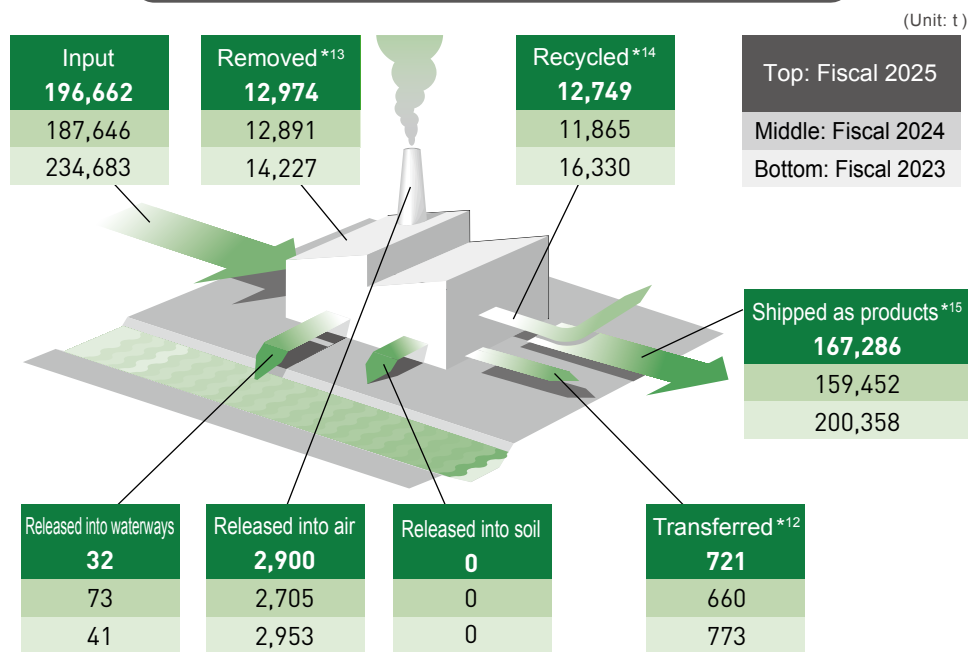
In fiscal 2025, we were able to reduce Human Environmental Impact by 66% compared with fiscal 2011. We will continue to implement our activities to minimize emissions of the substances with high environmental loads from our production activities.

VOC*10 Emissions



*10 Emissions of Volatile Organic Compounds (VOC) into the air caused by use. The calculation covers 100 major VOC substances that Panasonic Group selected from those listed in the Air Pollution Control Act.

Material Balance of Substances in the Management Rank*11



*11 Based on the Chemical Substances Management Rank Guidelines (for factories). Includes all the substances specified in the Pollutant Release and Transfer Register Act.

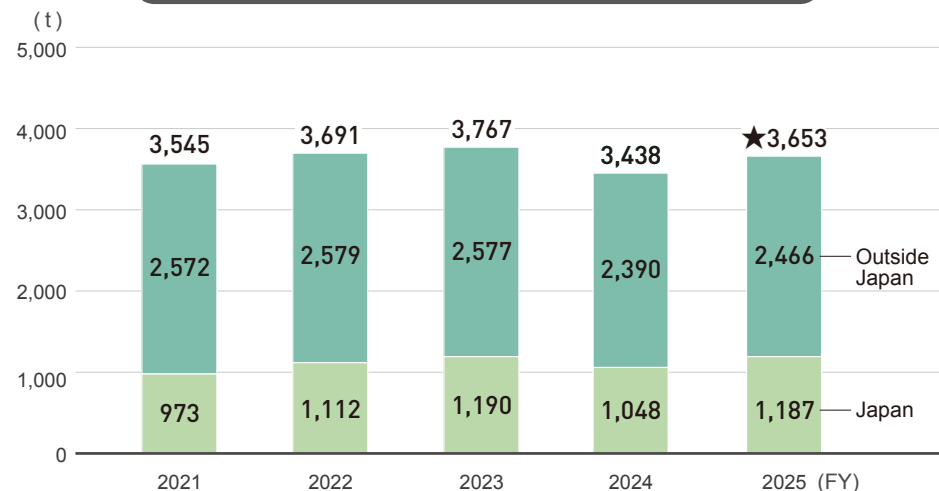
*12 Includes substances transferred as waste, as well as those discharged into the sewage system. Recycled amount which is free of charge or accompanies treatment cost under the Waste Management Law is included in "Recycled." (Different from the transferred amount reported under the PRTR Law.)

*13 The amount of substances converted into other substances through neutralization, decomposition, or other chemical treatment.

*14 The amount of substances recycled with revenue, as well as those recycled free of charge or with any payment.

*15 The amount of substances that have been changed to other substances as a result of chemical reactions, and/or those that are contained in or accompanied with products and shipped out of factories.

Release/Transfer of Substances Requiring Management*16



*16 Husmann Parent Inc. and its consolidated subsidiaries not included.

Other Initiatives

History of Environmental Activities

Era	Year	Panasonic Group	World	Japan
~1970s	1967			• Basic Law for Environmental Pollution Control enacted
	1968			• Air Pollution Control Law enacted
	1970	• Pollution Survey Committee established		• Water Pollution Control Law enacted • Waste Disposal and Public Cleansing Law enacted
	1971			• Environment Agency established
	1972	• Environmental Management Office established	• U.N. Conference on Human Environment held in Stockholm (Declaration of Human Environment adopted)	
	1973		• First oil shock occurred	
	1975	• Environmental Management Regulations enacted		
1980s	1979		• Second oil shock occurred	• Energy Conservation Law enacted
	1985		• Vienna Convention for the Protection of the Ozone Layer adopted	
	1987		• Montreal Protocol on Substances that Deplete the Ozone Layer adopted • World Commission on Environment and Development (the Brundtland Commission) advocated the concept of sustainable development	
	1988	• CFC-reduction Committee established		• Ozone Layer Protection Law enacted
	1989	• Environmental Protection Promotion Office established		
	1991	• Matsushita Environmental Charter (Environmental Statement and Code of Conduct) enacted • Matsushita Product Assessment adopted and implemented		• Keidanren Global Environment Charter enacted by Japan Federation of Economic Organizations • Law for Promotion of Effective Utilization of Resources enacted
1990s	1992	• Environmental Policy Committee established	• The Earth Summit held in Rio de Janeiro, Brazil; Agenda21 and Rio Declaration on Environment and Development adopted • United Nations Framework Convention on Climate Change adopted	
	1993	• Matsushita Environmental Voluntary Plan (Year 2000 targets) adopted • Matsushita Group' global environmental internal audits launched		• The Basic Environment Law enacted
	1995	• Acquired Environmental Management System Certification at AV Kadoma Site (first in the Matsushita Group)	• First Conference of Parties to the U.N. Framework Convention on Climate Change (COP1) held in Berlin	• Containers and Packaging Recycling Law enacted
	1996		• ISO 14001 International Standard on Environmental Management Systems launched	
	1997	• Corporate Environmental Affairs Division (CEAD) established • Environmental Conference established (held semi-annually)	• COP3 held in Kyoto and adopted the Kyoto Protocol	• Keidanren Appeal on the Environment announced by Japan Federation of Economic Organization

Era	Year	Panasonic Group	World	Japan
	1998	• Love the Earth Citizens' Campaign commenced • Recycling Business Promotion Office established • First environmental report (1997) published		• Home Appliance Recycling Law enacted (took effect in 2001) • Law Concerning the Promotion of the Measures to Cope with Global Warming enacted • Energy Conservation Law revised: Top Runner Approach introduced
	1999	• Green Procurement launched • Chemical Substances Management Rank Guidelines established • Acquired ISO14001 Certification in all manufacturing business units		• PRTR (Pollutant Release and Transfer Register) Law enacted
2000s	2000	• Lead-free Solder Project commenced • Held first environmental exhibition for general public in Osaka	• Global Reporting Initiative (GRI) issued • The Sustainability Reporting Guidelines	• Basic Law for Establishing the Recycling-based Society enacted • Law for Promotion of Effective Utilization of Resources enacted
	2001	• Environmental Vision and Green Plan 2010 adopted • Held Environmental Forum in Tokyo and Freiburg, Germany • Panasonic Eco Technology Center launched	• Reached final agreement on the actual rules of Kyoto Protocol in COP7 held in Marrakesh	• Reorganized into the Ministry of the Environment • Law Concerning Special Measures against PCBs enacted
	2002	• Panasonic Center Tokyo opened	• Johannesburg Summit (Rio+10) held	• Kyoto Protocol ratified • Vehicle Recycling Law enacted • Law for Countermeasures against Soil Pollution enacted
	2003	• Declared 'Coexistence with the Global Environment' as one of the twin business visions • Factor X advocated as an indicator for Creating Value for a New Lifestyle • Completely introduced lead-free soldering globally • Super GP Accreditation System launched • Achieved zero waste emissions in Japanese manufacturing business sites (ongoing program) • Held Environmental Forum in Tokyo	• EU's WEEE Directive was enacted	
	2004	• Environmental Vision and Green Plan 2010 revised • PCB Management Office established • Superior GP Accreditation System launched		• Prohibited manufacturing and use of products containing asbestos in principle
	2005	• Participated in Expo 2005 Aichi, Japan as an official sponsor • Green Plan 2010 revised • Continued with the nationwide Lights-out Campaign • 3R Eco Project launched • Completed the elimination of specified substances (6 substances) in products • Matsushita Group's Green Logistics Policy established • CF Accreditation System introduced • Panasonic Center Osaka opened • Eco & Ud HOUSE opened	• Kyoto Protocol entered into force	• Expo 2005 Aichi, Japan held • National campaign against global warming "Team -6%" launched • Marking for the presence of the specified chemical substances for electrical and electronic equipment (J-Moss) established

Era	Year	Panasonic Group	World	Japan
	2005	<ul style="list-style-type: none"> Installed the first commercial household fuel cell cogeneration system in the new official residence of the Japanese Prime Minister Won the first place in Nikkei Environmental Management Survey 		
	2006	<ul style="list-style-type: none"> Environmental specialist position established ET Manifest introduced into all manufacturing sites of Panasonic in Japan Realized lead-free plasma display panels and introduced them to the market Full-fledge introduction of biodiesel fuel in logistics 	<ul style="list-style-type: none"> Restriction of Hazardous Substances (RoHS) Directive took effect in EU 	<ul style="list-style-type: none"> Relief Law for Asbestos Victims enacted Energy Conservation Law revised: new cargo owner obligations, widened product scope of its application, and top runner standard revision
	2007	<ul style="list-style-type: none"> Energy conservation activities at our factories in Malaysia approved as CDM project by the U.N. A new environmental mark 'eco ideas' introduced Panasonic Center Beijing opened Environmental Forum in China held "Declaration of Becoming an Environmentally Contributing Company in China" announced Panasonic 'eco ideas' Strategy announced 	<ul style="list-style-type: none"> The Fourth Assessment Report of the Intergovernment Panel on Climate Change (IPCC) released Registration, Evaluation, Authorisation and Restriction of Chemicals entered into force in EU Framework for CO₂ reduction agreed at Heiligendamm Summit (G8) The Bali Road Map for the post Kyoto Protocol agreed at COP13 Administration on the Control of Pollution Caused by Electronic Information Products (China RoHS) came into effect 	<ul style="list-style-type: none"> 'Cool Earth 50' announced by Prime Minister Abe '21st Century Environment Nation Strategy' formulated 'The Third National Biodiversity Strategy of Japan' formulated 'Ministerial ordinance partially amending the Enforcement Regulation of the Waste Management and Public Cleansing Law' promulgated 'Domestic Emissions Trading Scheme Review Committee' established 'The Second Fundamental Plan for Establishing a Sound Material-Cycle Society' formulated
	2008	<ul style="list-style-type: none"> Established the Corporate CO₂ Reduction Promoting Committee Held environmental exhibitions, 'eco ideas' World Home Appliances Company announced environmental statement in which named its Kusatsu site as 'eco ideas' Factory Announced 'eco ideas' Declaration in Europe Established Environmental Strategy Research Center 	<ul style="list-style-type: none"> G20 (conference of key countries' environmental and energy ministers) held Hokkaido Toyako Summit held 	<ul style="list-style-type: none"> Cool Earth Promotion Program announced by Prime Minister Fukuda Mislabeling incident of waste paper pulp percentage Long-term Energy Demand and Supply Outlook announced Japan's Voluntary Emission Trading Scheme started
	2009	<ul style="list-style-type: none"> Opened the 'eco ideas' House to demonstrate a lifestyle with virtually zero CO₂ emissions throughout the entire house Announced the Asia Pacific 'eco ideas' Declaration Announced 'eco ideas' factories (in Czech, Malaysia, Thailand, and Singapore) Sanyo Electric joined the Panasonic Group 	<ul style="list-style-type: none"> China WEEE law promulgated New framework for countermeasures against global warming on and after 2013 (post-Kyoto Protocol), the Copenhagen Accord, was adopted at the COP15 (Copenhagen conference) Seeking to emerge from the Lehman collapse, countries throughout the world accelerated actions for the Green New Deal 	<ul style="list-style-type: none"> Energy Conservation Law amended: Covered area expanded from factories to commercial sector facilities Flat-panel TV and clothes dryer added as covered products under the Home Appliance Recycling Law 'Eco point' system started
2010s	2010	<ul style="list-style-type: none"> Announced "Vision looking to the 100th anniversary of our founding in 2018" Announced new midterm management plan, "Green Transformation 2012 (GT12)" Announced 'eco ideas' Declarations (Latin America, Asia Pacific, and Russia) Established 'eco ideas' Forum 2010 in Ariake, Tokyo Commenced business of Factory Energy Conservation Support Service Announcement of Green Plan 2018 Panasonic ECO RELAY Japan (PERJ) launched. 	<ul style="list-style-type: none"> COP10 held in Nagoya—Nagoya agreement made APEC meeting held in Yokohama Ruling party lost in US midterm election—changes in anti global warming policy Cancun agreement made in COP16—Post-Kyoto framework still to be discussed 	<ul style="list-style-type: none"> Draft legislation of Basic Law of Global Warming Countermeasures submitted but remained in deliberation Obligatory greenhouse gas emissions reduction started as a part of Tokyo Emissions Trading Scheme Waste Management and Public Cleansing Law amended: self treatment regulations tightened Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL) and Law concerning Pollutant Release and Transfer Register (PRTR) amended

Era	Year	Panasonic Group	World	Japan
	2011	<ul style="list-style-type: none"> Announced North America & Taiwan 'eco ideas' Declarations Announced establishment of Panasonic Dadi Dowa Summit Recycling Hangzhou Co., Ltd. Announced the Fujisawa Sustainable Smart Town Project Established Corporate Electricity Saving Division that bridges functions across the organization 	<ul style="list-style-type: none"> Rare earth prices soared Revised RoHS directives enforced in EU COP17 (Durban Climate Conference): Agreement made on long-term future of the scheme, and the second commitment period for the Kyoto Protocol (Japan announced non-commitment) 	<ul style="list-style-type: none"> Home appliance eco-point incentive program finished The Great East Japan Earthquake Revised Air Pollution Control Act and Water Pollution Control Act enforced Act on Special Measures Concerning Procurement of Renewable Electric Energy by Operators of Electric Utilities enacted (Feed-in tariff system to be enforced July 2012)
	2012	<ul style="list-style-type: none"> Business reorganization due to full acquisition of Panasonic Electric Works and SANYO Electric Commenced sales of Resources Recycling-oriented Product series Terminated production of household incandescent light bulbs Establishment of Environmental Management Group, Environment & Quality Center, Global Manufacturing Division Communication of 'eco ideas' Declaration (Vietnam) 	<ul style="list-style-type: none"> United Nations Conference on Sustainable Development (Rio +20) "Doha Climate Gateway" adopted at COP 18 Doha 2012, to lay down a future legal framework in which all nations can participate by 2020 and onwards Revised WEEE Directive implemented in Europe 	<ul style="list-style-type: none"> The Recycle Resource Project, national campaign by Ministry of the Environment, commenced 2012 Japan Tax Reform Bill enacted (Environment tax came into force in October 2012) Feed-in tariff for recyclable energy put into effect
	2013	<ul style="list-style-type: none"> Announced new midterm management plan Cross-Value Innovation 2015 Announced new brand slogan "A Better Life, A Better World" PETEC's home appliance recycling reached a cumulative total of 10 million units Announced 'eco ideas' factory (Philippines) 	<ul style="list-style-type: none"> Phase I of the Kyoto Protocol ends. Japan's target expected to be achieved in combination with forest CO₂ absorption and application of the Kyoto Protocol mechanisms. Minamata Convention on Mercury to internationally regulate import and export of mercury adopted at UN conference IPCC Fifth Assessment Report (Working Group 1) announced the possibility of human activity being the principal cause of global warming observed since the mid-20th century is "extremely high." Global average surface temperature is expected to rise as high as 4.8°C COP 19 Warsaw reaffirmed participation of all nations in the future framework of the Convention for 2020 and later. Nations were asked to submit emission pledges well in advance of 2015 	<ul style="list-style-type: none"> Home Appliance Recycling Law for small household appliances enforced Basic Plan for Establishing a Recycling-Based Society implemented Keidanren's "Action Plan Towards Low-Carbon Society" started (until FY 2021) Amended Law Concerning the Rational Use of Energy and Amended Law Concerning the Promotion of the Measures to Cope with Global Warming established. Amended Act on the Rational Use and Management of Fluorocarbons promulgated (June) Voluntary Action Plan by the electric and electronics industry terminated. Achieved improvement by 48% in CO₂ emissions per basic unit in average actual production output for fiscal 2009–2013 (compared with fiscal 1991 level) to the target of 35% Japan announced in November its fiscal 2021 reduction target of 3.8% over fiscal 2006 and registered this with UNFCCC Office (but with a possible review of the tentative target, which does not include possible resumption of nuclear power plant operations)
	2014	<ul style="list-style-type: none"> Panasonic DADI DOWA Summit Recycling Hangzhou Co., Ltd., started operation Opening of Fujisawa Sustainable Smart Town Announced Eco Declaration (Southeast Asia & Pacific) Communication of housing & town development at the International Greentech & Eco Products Exhibition & Conference (IGEM) (Malaysia) 	<ul style="list-style-type: none"> Targets for product environmental regulations in Europe begin to shift from energy saving to resource efficiency and environmental impact EU Parliament reelection results in the appointment of Mr. Jean-Claude Juncker as President of the European Commission. Review of the circular economy package was decided. IPCC 5th Assessment Report analyzed that the current multiple ways to achieve control of global temperature rise to less than 2°C cannot be materialized unless the target becomes nearly zero by the end of the century. Attention to "adaptation" is growing. COP12 Convention on Biodiversity, PyeongChang concluded the interim assessment of the Aichi Biodiversity Targets as "progress has been made but remains inadequate" 	<ul style="list-style-type: none"> The amended Energy Conservation Act was enforced, incorporating action on power conservation during peak periods into existing qualitative reduction targets Phase II of the Commitment to a Low Carbon Society, a voluntary program promoted by Keidanren as measures against global warming, was newly established in response to government request, setting the target year to 2030 Toyota Motor launched fuel-cell vehicle MIRAI into the commercial market

Era	Year	Panasonic Group	World	Japan
	2014		<ul style="list-style-type: none"> • COP 20 (Peru) reached agreement on the policy of developing reduction targets based on common rules for publication of "a new legal framework beyond 2020 applicable to all Parties" 	
	2015	<ul style="list-style-type: none"> • Won Zayed Future Energy Prize 2015 • Wonder Japan Solutions (Tokyo) held for the first time • Announced the introduction of indirect contributions through housing, automotive, and B2B solutions in the size of contribution in reducing CO₂ emissions • Announced the Tsunashima Sustainable Smart Town development project, together with Yokohama City and Nomura Real Estate Development Company 	<ul style="list-style-type: none"> • Paris Agreement on the international legal framework for global warming control from 2020 and later was adopted at COP21 (Paris) • 2030 Agenda for Sustainable Development was adopted at the UN Summit, focusing chiefly on sustainable development goals (SDGs) 	<ul style="list-style-type: none"> • Draft proposal to cut greenhouse gases by 26% over 2013 levels as its 2030 greenhouse gas reduction target announced by the Japanese government • COOL CHOICE, a new nationwide movement for greenhouse gas reduction, started
	2016	<ul style="list-style-type: none"> • Establishment of Environmental Management Department, Quality & Environment Division • Announced R&D 10-Year Vision • Revised Green Plan 2018 • Announced participation in Future Living Berlin, the first Smart City project in Germany • Announced collaboration with Tesla Motors for solar batteries 	<ul style="list-style-type: none"> • G7 Toyama Environment Ministers' Meeting held; ministers representing the G7 nations and the EU discussed policies on seven themes including resource efficiency and 3R, biodiversity, climate change, and related measures • UK decided to leave the EU (Brexit) in a national referendum • GRI announced "GRI Standard," the new guidelines for CSR reports • COP 22 held in Marrakesh, Morocco. Agreement reached on establishing a rulebook to make the Paris Agreement effective by 2018 • Donald Trump won the US presidential election • COP 13, the 13th meeting of the Conference of the Parties on Biological Diversity, held in Cancun, Mexico 	<ul style="list-style-type: none"> • The 2016 Kumamoto Earthquake • The Plan for Global Warming Countermeasures was decided by the Cabinet. Direction of Japan's global warming countermeasures to achieve the Intended Nationally Determined Contributions under COP 21 was clarified. Long-term goal of reducing greenhouse gas emissions by 80% by 2050 was set • Act on Promotion of Global Warming Countermeasures was amended; focuses on promoting the enhancement of Cool Choice, the reinforcement of international cooperation, and regional global warming countermeasures
	2017	<ul style="list-style-type: none"> • Announcement of Panasonic Environment Vision 2050 • Opening of Tsunashima Sustainable Smart Town 	<ul style="list-style-type: none"> • France, UK, and China announced the prohibition of sales of gas and diesel cars and the conversion to EVs in the future 	<ul style="list-style-type: none"> • Revision of the Charter of Corporate Behavior delivering on the SDGs through the realization of Keidanren Society 5.0
	2018	<ul style="list-style-type: none"> • Announcement of Monozukuri (Manufacturing) Vision • Achievement of net zero factories at Panasonic Eco Technology Center Co., Ltd. (PETEC), Panasonic Energy Belgium N.V. (PECBE), and Panasonic do Brazil (PANABRAS) 	<ul style="list-style-type: none"> • COP24 was held. The policy based on the Paris Agreements to be uniformly applied to all member countries was adopted 	<ul style="list-style-type: none"> • The fifth Basic Environment Plan was decided by the Cabinet. Set up six cross-field strategies utilizing the concepts of SDGs
	2019	<ul style="list-style-type: none"> • Announcement of Green Plan 2021 • Participation in 'RE100', an international initiative for the use of 100% renewable energy as electricity used in business operations 	<ul style="list-style-type: none"> • UN Climate Action Summit was held. Rising trend of achieving net zero greenhouse gas emissions, with a target of limiting global temperature rise to 1.5°C • COP25 was held in Spain. The statement urging governments to increase the GHG reduction targets was adopted 	<ul style="list-style-type: none"> • G20 Osaka Summit was held. "Osaka Blue Ocean Vision", which aims to further reduce pollution caused by marine plastic wastes, was shared
2020s	2020	<ul style="list-style-type: none"> • Launched a Global Circular Economy Project to accelerate corporate-wide activities to build a circular economy • Started Sustainable Management Promotion Consortium where internal members who are interested in sustainability get together to discuss related topics. • Achieved net zero factory in PEC (Wuxi) in China. 	<ul style="list-style-type: none"> • Countries accelerated their decarbonization efforts and subsequently announced carbon neutrality statements. • EU released a new battery regulation proposal. 	<ul style="list-style-type: none"> • Announced carbon neutrality by 2050. • Formulated "Green Growth Strategy Through Achieving Carbon Neutrality in 2050."

Era	Year	Panasonic Group	World	Japan
	2021	<ul style="list-style-type: none"> • Environment Vision transformed to GREEN IMPACT. • Set up Sustainability Management Committee led by the Group CEO. 	<ul style="list-style-type: none"> • COP26 was held in UK. Countries agreed to aim for 1.5°C target for global warming. 	<ul style="list-style-type: none"> • Announced reduction of GHG emissions by 46% below FY2013 levels by FY2030 and continuing strenuous effort in its challenge toward a 50% reduction as Nationally Determined Contributions (NDCs). • Formulated the Sixth Strategic Energy Plan.
	2022	<ul style="list-style-type: none"> • Announced impact targets to reduce CO₂ emissions in the world by 2050 that is the target year set in the Panasonic Green Impact. • Announced the Green Impact Plan 2024. • Automotive Systems Co., Ltd. achieved net zero carbon at all its sites worldwide. 	<ul style="list-style-type: none"> • COP 27 was held in Egypt. • COP 15 in Canada; the Kunming-Montreal Global Biodiversity Framework (GBF) was adopted. • IPCC announced its Sixth Assessment Report. 	<ul style="list-style-type: none"> • The Japan's government announced 'its basic policy toward achieving GX (Green Transformation)'. • METI announced 'its Growth-Oriented, Resource-Autonomous Circular Economy strategy'. • Keidanren announced 'Towards Green Transformation (GX)'.
	2023	<ul style="list-style-type: none"> • Group CEO talked in a seminar at the Japan Pavilion in COP28 (Dubai), about significance of the avoided emissions and necessity of its global standardization. • Sustainable Forest in the Kusatsu site was certified as "Shizen Kyosei Site" by Japan's MoE. • Panasonic Group Circular Economy (CE) Policy was formulated. 	<ul style="list-style-type: none"> • Importance of recognition of the avoided emissions is mentioned explicitly in the respective outcome documents of G7 Ministers' Meeting on Climate, Energy, and Environment in the G7 summits in Sapporo and Hiroshima. • TNFD published its final recommendations such as information disclosure on biodiversity. • ISSB published its final sustainability disclosure standards. 	<ul style="list-style-type: none"> • Japan's MoE launched Decokatsu (National Movement for New and Valuable Lifestyles leading to Decarbonization). • Japan's MoE started to certify sites where biodiversity has been conserved by private sector's initiatives, etc., as "Shizen Kyosei Site".
	2024	<ul style="list-style-type: none"> • In the opening keynote address at CES 2025, the Group CEO announced the Panasonic Group's commitment to a sustainable global environment. • Received certification of our net-zero target from the Science-based Target initiative (SBTi). • At the World Business Council for Sustainable Development (WBCSD) held during New York Climate Week, the Group CEO promoted the circular economy model. 	<ul style="list-style-type: none"> • The new climate finance targets were established at COP 29 (Azerbaijan) • At Biodiversity COP 16 (Colombia), TNFD announced its guidance for nature transition plans. • European Commission enforces Eco-Design for Sustainable Product Regulation (ESPR). 	<ul style="list-style-type: none"> • With the country's new NDC (Nationally Determined Contributions), the Japan's government submitted to the United Nations its target for reducing greenhouse gases by 60% by FY 2035 and 73% by FY 2040 compared to the FY 2013 level. • Japan's Cabinet Office approved the Sixth Basic Environmental Plan that envisions "Circular and Symbiotic Society". • SSBJ announced final version of its Sustainability Disclosure Standards.

Environmental Data

Energy

*See Page 36

	FY2023	FY2024	FY2025
Energy	4.7 TWh	4.5 TWh	4.5 TWh
Purchased electricity	3.23 TWh	3.08 TWh	3.07 TWh
including renewable energy	0.47 TWh	0.72 TWh	0.95 TWh
Installation of renewable energy facilities in our own sites	0.06 TWh	0.07 TWh	0.11 TWh
Town gas	71 million m ³	68 million m ³	70 million m ³
LNG	8.8 kt	9.9 kt	10.8 kt
LPG	5.6 kt	4.5 kt	4.4 kt
Heavy oil	6.9 MI	7.0 MI	6.2 MI
Light Oil	2.0 MI	1.9 MI	2.0 MI
Kerosene	1.8 MI	1.6 MI	1.6 MI
Volatile	0.1 MI	0.1 MI	0.1 MI
Steam	434 TJ	373 TJ	336 TJ
Hot Water	49 TJ	37 TJ	37 TJ

CO₂ Emission in Business Activities

*See Page 55

	FY2023	FY2024	FY2025
CO ₂ Emission in Business Activities	1.63 million ton	1.37 million ton	1.24 million ton
Japan	0.69 million ton	0.60 million ton	0.53 million ton
China and North East Asia	0.30 million ton	0.19 million ton	0.18 million ton
Southeast Asia and Pacific	0.38 million ton	0.33 million ton	0.28 million ton
North America and Latin America	0.20 million ton	0.19 million ton	0.18 million ton
India, South Asia, Middle East and Africa	0.04 million ton	0.04 million ton	0.04 million ton
Europe and CIS	0.01 million ton	0.01 million ton	0.01 million ton

Breakdown of Total GHG Emissions (CO₂-equivalent) in Business Activities

*See Page 55

	FY2023	FY2024	FY2025
Scope 1			
CO ₂ from energy sources	224 kt	216 kt	220 kt
CO ₂ from non-energy	183 kt	101 kt	53 kt
CO ₂	1 kt	1 kt	1 kt
HFC	180 kt	97 kt	50 kt
SF ₆	2 kt	2 kt	2 kt
NF ₃ and others	1 kt	1 kt	1 kt
Scope 2 Energy sources	1,433 kt	1,207 kt	1,099 kt
Carbon offset by credit	-26 kt	-57 kt	-79 kt
Total	1,812 kt	1,465 kt	1,291 kt

GHGs (by Scope)

*See Page 37

	FY2023	FY2024	FY2025
Scope 1	406 kt	316 kt	272 kt
Scope 2	1,433 kt	1,207 kt	1,099 kt
Scope 3	127,371 kt	124,995 kt	144,246 kt
1. Purchased goods and services	21,543 kt	21,954 kt	20,324 kt
2. Capital goods	880 kt	1,546 kt	2,030 kt
3. Fuel- and energy-related activities	212 kt	243 kt	251 kt
4. Upstream transportation and distribution	887 kt	741 kt	720 kt
5. Waste generated in operations	0.1 kt	1 kt	1 kt
6. Business travel	32 kt	31 kt	30 kt
7. Employee commuting	111 kt	107 kt	106 kt
8. Upstream leased assets	—	—	—
9. Downstream transportation and distribution	61 kt	146 kt	147 kt
10. Processing of sold products	153 kt	234 kt	170 kt
11. Use of sold products	95,029 kt	91,027 kt	111,151 kt
12. End-of-life treatment of sold products	7,537 kt	7,860 kt	7,999 kt
13. Downstream leased assets	—	—	—
14. Franchises	—	—	—
15. Investments	928 kt	1,108 kt	1,322 kt
total	129,209 kt	126,518 kt	145,616 kt

GHG emissions reduction targets (SBT 1.5°C accreditation) Progress rate

*See Page 39

	FY2023	FY2024	FY2025
Emissions from Panasonic Group business activities (Scope 1 and 2)	23 %	38 %	45 %
Emissions from use of Panasonic Group products (Scope 3)	— ²	— ²	— ²

² Progress rate not calculated due to increase in emissions because of expansion of products subject to calculation

RE100 Progress rate

*See Page 54

	FY2023	FY2024	FY2025
RE100 Progress rate	15.6 %	24.3 %	32.5 %

Logistics

*See Page 36 and <https://holdings.panasonic/global/corporate/sustainability/environment/logistics.html>

	FY2023	FY2024	FY2025
Energy	1.50 TWh	1.32 TWh	1.31 TWh
Biodiesel fuel	9.89 kl	1.27 kl	0.399 kl
CO ₂ Emission: global	887 kt	741 kt	720 kt
International transportation	246 kt	215 kt	205 kt
intra-region outside Japan	518 kt	411 kt	403 kt
Japan	123 kt	115 kt	112 kt
Transportation Amount by Transportation Method (Japan)	850 million tons-kilometers	770 million tons-kilometers	750 million tons-kilometers
Air	0.3 million tons-kilometers	0.2 million tons-kilometers	0.2 million tons-kilometers
Truck	793 million tons-kilometers	713 million tons-kilometers	676 million tons-kilometers
Ship	57 million tons-kilometers	51 million tons-kilometers	59 million tons-kilometers
Railroad	6 million tons-kilometers	5 million tons-kilometers	15 million tons-kilometers

■ Resources

*See Page 36, 63

	FY2023	FY2024	FY2025
Recycled resin	12.4 kt	17.2 kt	15.2 kt
Total wastes including revenue-generating waste	282 kt	258 kt	278 kt
Landfill	2.3 kt	1.5 kt	1.9 kt
Factory waste recycling ratio	99.1 %	99.3 %	99.2 %

■ Recycling

*See Page 36

	FY2023	FY2024	FY2025
Collected products	162 kt	151 kt	145 kt
Recycled products	123 kt	113 kt	110 kt
Metals	89 kt	83 kt	81 kt
Glass	2 kt	1 kt	1 kt
Other	32 kt	28 kt	27 kt
Generated waste	39 kt	37 kt	35 kt

■ Water

*See Page 74

	FY2023	FY2024	FY2025
Water Withdrawal	15.27 million m ³	13.87 million m ³	13.49 million m ³
Municipal water/industrial water	9.60 million m ³	8.62 million m ³	8.34 million m ³
Groundwater	5.67 million m ³	5.24 million m ³	5.14 million m ³
Rivers/lakes	0 million m ³	0 million m ³	0 million m ³
recycled water	1.55 million m ³	1.39 million m ³	1.40 million m ³
Water discharged	11.78 million m ³	10.60 million m ³	10.45 million m ³
Sewer systems	5.39 million m ³	4.90 million m ³	4.71 million m ³
Waterways	6.39 million m ³	5.70 million m ³	5.74 million m ³

■ Chemical substances

*See Page 82-83

	FY2023	FY2024	FY2025
Input	234,683 t	187,646 t	196,662 t
Release	2,994 t	2,778 t	2,932 t
Released into waterways	41 t	73 t	32 t
Released into air	2,953 t	2,705 t	2,900 t
including VOC emissions	1,539 t	1,426 t	1,588 t
Released into soil	0 t	0 t	0 t
Transfer	773 t	660 t	721 t
Recycled	16,330 t	11,865 t	12,749 t
Shipped as products	200,358 t	159,452 t	167,286 t
Removed	14,227 t	12,891 t	12,973 t
Human Environmental Impact	431 kcount	386 kcount	339 kcount

■ Environmental Accounting

*See Page 38

	FY2023	FY2024	FY2025
Environmental conservation in factories			
Investments	6,590 million yen	3,791 million yen	3,241 million yen
Expenses	155 million yen	128 million yen	61 million yen
Economic benefit	1,655 million yen	907 million yen	394 million yen
Environmental Conservation Benefits (in physical terms)			
CO2 emissions from production activities	320 kt	260 kt	130 kt
Human Environmental Impact	▲ 15 kcount	45 kcount	47 kcount
Landfill of waste	0.6 kt	0.8 kt	▲ 0.4 kt
Water consumption	1.97 million m ³	1.47 million m ³	0.388 million m ³
Economic Effects for Customers (Electricity cost reduction from product usage)			
Reduced amount of electricity	30.9 TWh	46.7 TWh	80.6 TWh
Reduced electricity costs	783.5 billion yen	1256.7 billion yen	2298.0 billion yen

■ Number of the ISO 14001 Certification

*See Page 30

	FY2023	FY2024	FY2025
Number of certifications obtained	149	144	133
Manufacturing	128	123	113
Non-manufacturing	21	21	20

■ Case of Violations of Laws and Ordinances

*See Page 75

	FY2023	FY2024	FY2025
Environmental pollution	3 (0)	4 (0)	0 (0)
Air	2 (0)	2 (0)	0 (0)
Water quality	0 (0)	0 (0)	0 (0)
Noise	0 (0)	0 (0)	0 (0)
Odor	0 (0)	0 (0)	0 (0)
Waste	0 (0)	2 (0)	0 (0)
Other	1 (0)	0 (0)	0 (0)

■ Soil and Groundwater Pollution Surveys and Remedial Measures

*See Page 76

	FY2023	FY2024	FY2025
Number of sites that completed remedial measures	1 (1)	4 (4)	2 (1)
Number of sites currently taking remedial measures	42 (37)	40 (35)	38 (34)

Respect for Human Rights Materiality

Panasonic Group upholds the management philosophy that a company is a public entity of society. We recognize that we have a responsibility to protect the rights of all people involved in our businesses, including our employees^{*1}, customers, and employees of our business partners, and to contribute to their well-being and happiness. As a company operating globally, we comply with all applicable laws and regulations in our business activities while considering the human rights of all our stakeholders and respecting internationally recognized human rights as expressed in the International Bill of Human Rights and the International Labour Organization's (ILO) Declaration on Fundamental Principles and Rights at Work.

The Group is committed to pursuing human rights due diligence to identify, prevent, mitigate, and address any adverse human rights impacts related to our business activities, products, services, and transactions. We also seek our suppliers, customers, or business partners to understand and implement our human rights and labor compliance policies.

Respect for human rights is one of the Group's key material issues. For more on materiality, see [pages 6-9](#).

^{*1} Panasonic employees: (1) all regular and contracted employees having employment relationships with any Panasonic Group company, all temporary staff and seconded employees working under the control and supervision of any Panasonic Group company, and (2) all directors, executive officers, executive counselors, fellows, corporate auditors, supervisory board members, and corporate advisors (collectively, "executives") appointed by any Panasonic Group company. The definition also includes employees with employment relationships to any key companies, subject to certain Group HR and other systems.

Policy

Panasonic Group established the Panasonic Group Human Rights and Labour Policy (hereinafter, the "Human Rights and Labour Policy"), referencing the below international standards and incorporating external experts' opinions. This policy states that, predicated on compliance with international standards and the laws and regulations of each country that apply to our business activities and transactions, we are committed to respecting internationally recognized human rights; identifying, preventing, mitigating, and remediating the adverse impact on human rights; promoting remedy and other measures for victims; creating a rewarding working environment; and engaging in dialogue on these issues with various stakeholders. Following this policy, we have established internal rules, developed a promotion system, and advanced specific initiatives for respecting human rights and creating a rewarding work environment.

Moreover, the Panasonic Group Code of Ethics and Compliance ("Code of Ethics and Compliance") defines the commitments that all Group employees must fulfil and positions respect for human rights as our social responsibility. We strive to raise awareness of this responsibility.

[Main international standards used as reference]

- The United Nations Guiding Principles on Business and Human Rights
- The United Nations International Bill of Human Rights (Universal Declaration of Human Rights, International Covenant on Civil and Political Rights, and International Covenant on Economic, Social and Cultural Rights)
- ILO Declaration on Fundamental Principles and Rights at Work and ILO Fundamental Conventions (Core Labour Standards)

[🔗](https://holdings.panasonic/global/corporate/sustainability/social/human-rights/policy.html) **Panasonic Group Human Rights and Labour Policy**

<https://holdings.panasonic/global/corporate/sustainability/social/human-rights/policy.html>

[🔗](https://holdings.panasonic/global/corporate/about/code-of-conduct/chapter-5.html) **The Panasonic Group Code of Ethics & Compliance, 5. Our Social Responsibilities, 1. Respecting human rights**

<https://holdings.panasonic/global/corporate/about/code-of-conduct/chapter-5.html>

We regularly, and periodically as necessary, review these policies based on the opinions of external experts, relevant stakeholders, and their representatives. We revised our Human Rights and Labour Policy in August 2023 under the advisement of internal and external experts. This revision was meant to respond to the ILO's adding occupational health and safety to its Core Labour Standards and to enhance and consolidate efforts to prevent forced labor in the supply chain. After reviewing the changes with the Group and its operating companies' management and labor unions, the Group CEO approved and proclaimed the policy. The Group's Human Rights and Labour Policy is available in Japanese and English on our website. We also demand that all our suppliers respect human rights by complying with the Panasonic Supply Chain CSR Promotion Guidelines.

[🔗](https://holdings.panasonic/global/corporate/about/procurement/for-suppliers/pdf/guideline_E.pdf) **The Panasonic Supply Chain CSR Promotion Guidelines**

https://holdings.panasonic/global/corporate/about/procurement/for-suppliers/pdf/guideline_E.pdf

Responsible Executive and Framework

The executive officer responsible for the Group's initiatives on respecting human rights is the Group Chief Human Resources Officer (Group CHRO) (as of August 2025). The Group's executive officers' compensation is linked to relevant KPIs which reflect their responsible field in sustainability. The performance-linked compensation indicators for the Group CHRO include initiatives on human rights and labor compliance. The Sustainability Management Committee, chaired by the Group CEO, discusses important human rights issues under the supervision of the Board of Directors of Panasonic Holdings Corporation (PHD) and then reports these discussions to the Group Management Meeting and the Board. In fiscal 2024, the Sustainability Management Committee discussed challenges in the Social-related information disclosure, and in fiscal 2025,

the Committee discussed challenges in promoting human rights due diligence and future action plans. We have also identified human rights and labor compliance as a Group Major Risk for fiscal 2026, with efforts to mitigate these risks at all business sites. For more details, see the “Risk Management” chapter ([page 141-](#)).

The Social Sustainability Department, under the Group CHRO, leads our day-to-day efforts to respect human rights. As the supervising organization for the Group's human rights and labor initiatives, it collaborates primarily with HR functions, and also with other related functions such as legal and procurement, to promote these initiatives at each operating company of the Group. At each operating company, a human rights due diligence promotion leader takes the initiative in addressing human rights issues identified within the company.

Refer to “Responsible Supply Chain” ([page 111-](#)) for details on our initiatives within the supply chain.

Raising Awareness

Panasonic Group has translated its Code of Ethics and Compliance, which includes respect for human rights, into 22 languages and provides regular opportunities for employees to learn about it at the time of entry into a company and promotion. Furthermore, the Human Resources Division, a key related division, offers Business and Human Rights as a basic training elective for Group HR employees in Japan. We also provide training for all seconded employees, including management personnel, posted from Japan to overseas subsidiaries to ensure they understand the Group's initiatives and Human Rights and Labour Policy, as well as international standards and the laws of each country regarding corporate responsibility to respect human rights (494 employees participated in fiscal 2025). Additionally, we have conducted training in various Asian countries where most of our manufacturing operations are located for production and human resources managers (24 Asian regional HR managers, 102 managers in Thailand, 16 managers in Taiwan, and 32 managers in India attended in fiscal 2025). We also held a lecture on Business and Human Rights for the 32 executives of the Panasonic Group Workers Unions Association in fiscal 2025.

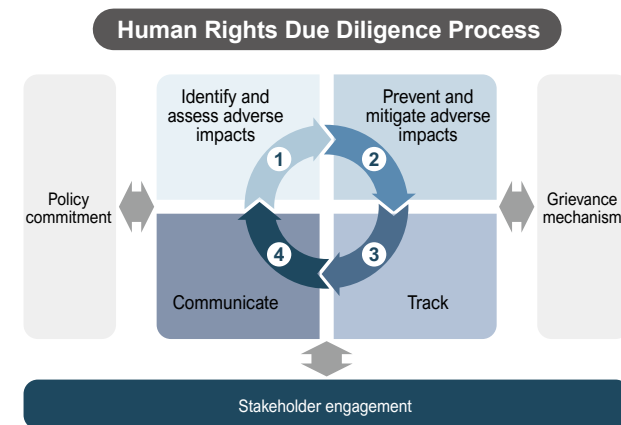
☞ The Panasonic Group Code of Ethics & Compliance Chapter, 5. Our Social Responsibilities, 1. Respecting human rights

<https://holdings.panasonic/global/corporate/about/code-of-conduct/chapter-5.html>

Human Rights Due Diligence

To respect the human rights of the stakeholders in its business activities, products and services, and transactions, the Group conducts human rights due diligence based on the UN Guiding Principles on Business and Human Rights and in reference to the OECD Due Diligence Guidance for Responsible Business Conduct. We incorporate input from external experts and

stakeholders when formulating related mechanisms and processes.



■ Framework for Promoting Human Rights Due Diligence

The Group recognizes the need to identify human rights risks across its value chain and business activities. Until now, the supervising organization has spearheaded efforts to identify and address human rights issues. However, each operating company in the Group engages in different business activities, and the types and anticipated severity of human rights risks are varied. Therefore, in fiscal 2025, we established a system for each operating company to proactively promote human rights due diligence taking into account their respective value chain and business characteristics. Additionally, given the complexity of supply chains associated with our operations, we strive to prevent and mitigate human rights risks in collaboration with each operating company and regional procurement departments with the support of the Global Procurement Division engaging in responsible supply chains. See “Responsible Supply Chain” ([page 111-](#)) for more details on our efforts.

We conducted practical training on human rights due diligence for the human rights promotion leaders appointed by each operating company (33 participants) in October 2024 to ensure that human rights due diligence is implemented across all operating companies. This training included lectures and case studies on the practical knowledge and skills on specific human rights due diligence process, methods to identify and assess human rights risks, and risk mitigation measures as well as lectures provided by multiple external experts to gain a deeper understanding of the international norms referenced by our group. We also conduct training tailored to specific regions and themes to prevent issues identified through human rights due diligence (see “Prohibiting Forced Labor” ([page 91](#)) for details on activities in Malaysia). We will continue to identify priority issues and regions and conduct appropriate training.

■ Identifying and Assessing Adverse Impacts on Human Rights

In fiscal 2025, operating companies identified and assessed human rights risks within their companies where they could leverage maximum influence to prevent and mitigate adverse human rights impacts. Each operating company identified human rights risks referring to international norms and guidelines and taking into account the characteristics of its business, the countries and regions where it operates. They then identified human rights issues based on the outcomes of interviews with relevant departments and their efforts to reduce risks. Furthermore, we consolidated the human rights issues identified by each operating company and identified forced labor and occupational health and safety as salient human rights issues within the Group. Going forward, we will take steps to address the identified issues and work to identify areas within our value chain where adverse human rights impacts are largest. We engage in dialogue, discussion, and collaboration with relevant internal and external stakeholders regarding our human rights due diligence systems and their continual improvement.

We will continue to improve the process for identifying priority human rights issues and, especially in the event of imminent human rights issues, we strive to prevent, mitigate, and remedy them as promptly as possible.

Our Efforts to Date (Self-Assessment)

In fiscal 2022, we conducted a detailed self-assessment of human rights and labor issues at our overseas manufacturing companies and sites to understand risks at the Group's manufacturing sites. In fiscal 2023, we expanded the scope to include some domestic manufacturing sites, and in fiscal 2024, the assessment covered nearly all domestic and overseas manufacturing companies and sites (a total of 202). As a result, we identified 96 issues related to forced labor, child labor, young workers, discrimination, and occupational health and safety, the areas we have designated as priority, at 30 companies and sites. All the companies and sites addressed those issues following the improvement plans and completed all corrective actions by March 31, 2025.

■ Preventing, Mitigating, and Remediating Adverse Impacts on Human Rights

The Group promotes various initiatives to prevent, mitigate, and address human rights risks identified through human rights due diligence, alongside the salient human rights issues of forced labor and occupational health and safety.

Prohibiting Forced Labor

Our Human Rights and Labour Policy clearly states the prohibition of any and all forms of

forced labor. We promote efforts to establish a recruitment and employment environment free from forced labor and unfair treatment following all applicable laws and regulations, internal rules and referencing international standards and guidelines that ILO and other organizations established. In the unlikely event that the Group or a third party, such as a supplier or business partner, is found to be engaged in, or suspected of being engaged in, forced labor or any of the 11 ILO Indicators of Forced Labour^{*2}, our internal rules stipulate that we must promptly address the negative impact on human rights, including by working to cease, correct, or mitigate such conduct or providing remediation for the victims.

In the supply chain, we ask our suppliers to take steps toward preventing forced labor through the Panasonic Supply Chain CSR Promotion Guidelines. For more details, see the "Responsible Supply Chain" chapter (page 111-).

^{*2} The 11 ILO Indicators of Forced Labour: abuse of vulnerability, deception, restriction of movement, isolation, physical and sexual violence, intimidation and threats, retention of identity documents, withholding of wages, debt bondage, abusive working and living conditions, and excessive overtime

◇ Responsible Recruitment and Employment

We recognize that migrant workers who cross national and regional borders to work at our manufacturing sites and in our supply chain are particularly vulnerable. The Group also employs foreign migrant workers who work across countries. Our Group companies in Malaysia, which have the highest number of foreign migrant workers in the Group, launched the Responsible Employment Project in 2018 in collaboration with the International Organization for Migration (IOM) which addresses global migration issues and have been working to identify and correct human rights issues as well as providing training on these issues. In Malaysia, the Group companies formulated the Policy on Responsible Recruitment and Employment of Foreign Migrant Workers in April 2020 and standard operating procedures in September 2021 (applicable to recruitment and employment of foreign migrant workers in Malaysian Group companies), and have been continuously making efforts in this regard. Some specifics from this policy are as follows:

- Prohibiting companies from retaining personal documents such as passports;
- Prohibiting foreign migrant workers from bearing recruitment fees and related costs;
- Notifying foreign migrant workers of basic employment terms in a language they understand before leaving their country of origin.

In fiscal 2025, with the cooperation of the IOM, we interviewed approximately 770 foreign migrant workers at manufacturing sites of our four Group companies in Malaysia to assess the actual implementation of the policy and the standard operating procedures. As a result, we identified issues such as insufficient rules enforcement in the internal recruitment and employment process and low awareness of the grievance mechanism for foreign migrant workers. To response to the identified issues and incorporate changes in local laws, we revised the policy and procedures in April 2025 with guidance from IOM. Additionally, we provided

all foreign migrant workers (approximately 1,700) at the manufacturing sites of the four companies with refresher training on their rights under employment contracts, internal work rules, operational safety measures, and the grievance mechanism and managers with training on discrimination and harassment.

🔗 **Policy on the Responsible Recruitment and Employment of Foreign Migrant Workers**
https://www.panasonic.com/content/dam/Panasonic/corporate/my/corporate/sustainability/Malaysia-Panasonic-Policy-2025_English.pdf

In fiscal 2025, we expanded the Responsible Employment Project in Malaysia to manufacturing contractors and service providers. We added requirements for compliance with respect for human rights to contracts with them and conducted training on international norms pertaining to forced labor, relevant local laws and regulations, and the Group's Human Rights and Labour Policy (63 manufacturing contractors and service providers participated).

We also recognize human rights risks in the recruitment and placement processes for foreign migrant workers and have begun establishing a due diligence framework for recruitment agencies.

For countries and regions with potential risks, we leverage our experience in Malaysia to raise awareness among manufacturing companies in the Group as well as interview them about their initiatives to provide advice on and monitor the status of corrective measures. In Taiwan, we arranged a third-party audit at a Group manufacturing company in fiscal 2025 to identify human rights risks for foreign migrant workers. We implemented corrective measures to address the identified issues, including revising provisions in employment contracts that were insufficient, improving living conditions and hygiene, and enhancing disaster preparedness in dormitories, and conducted training to reinforce the operation of the grievance mechanism.

In fiscal 2025, we explained human rights risks associated with the recruitment process for foreign migrant workers to Managing Directors from all Group companies in Taiwan and Thailand and discussed preventive measures with them (10 MDs from 7 companies in Taiwan and 13 MDs from 13 companies in Thailand). In Thailand, we also held workshops on forced labor and the human rights of foreign migrant workers for all department heads (87 people from 13 companies).

The Group aims to conduct in-person training on preventing forced labor at all sites that employ foreign migrant workers. In fiscal 2025, we conducted training at 13 companies and sites (40.6%) out of a total of 32 companies and sites^{*3}.

*3 Companies and sites that employed foreign migrant workers as of March 31, 2025

Prohibiting Child Labor and Protecting Young Workers

Our Human Rights and Labour Policy includes a clear expectation to work toward the effective

eradication of child labor.

We comply with the laws and regulations in the jurisdiction where we recruit employees, and we require that our recruitment agencies and other business partners do the same. We also do not permit workers under the age of 18 to engage in hazardous or harmful work. In the supply chain, we request our suppliers to take the same approach in the supply chain as outlined in the Panasonic Supply Chain CSR Promotion Guidelines. For more details, see the "Responsible Supply Chain" chapter ([page 111-](#)).

Prohibition of Discrimination and Harassment

Our Human Rights and Labour Policy clearly seeks to eliminate discrimination in the field of employment and occupation. Moreover, in our Code of Ethics and Compliance, the Group prohibits discrimination, behavior that leads to discrimination, and harassment on the basis of age, gender, race, skin color, beliefs, religion, social status, citizenship, ethnicity, marital status, sexual orientation, gender identity and expression, pregnancy, medical history, viral infection status, genetic information, disability status, political affiliation or orientation, labor union affiliation, veteran status, or any similar status or characteristic. We also strive to raise awareness of this prohibition. By doing so, we work on creating workplaces where it is possible for diverse talents to form critical partnerships with mutual respect and work together dynamically. For more details, see the "Maximizing the Potential of Diverse Talent and Organizations" chapter ([page 95-](#)).

◇ Recruitment Screening

We conduct thorough screening of applicants based on their suitability, abilities, and motivation in accordance with the laws and guidelines of each country. After identifying issues with our screening that could lead to discrimination or other human rights infringements, we strive to correct them in the short term while ensuring that we take measures to prevent recurrence through awareness-raising and education.

Respect for the Freedom of Association and the Right to Collective Bargaining

Our Human Rights and Labour Policy clearly expresses our support for freedom of association and the effective recognition of the rights to collective bargaining. In each country and region, we make efforts to establish healthy relations with employees and to solve their issues by active dialogue with them. In addition, based on our Human Rights and Labour Policy, we pursue ways to respect internationally recognized human rights principles at our locations in countries that do not legally permit the formation of labor unions.

◇ In Japan

The Group recognizes the rights of labor unions, including the right to organize, the right to collective bargaining, and the right to strike, as stipulated in the labor agreements concluded with each labor union with which the Group and its subsidiaries engage. We also prohibit discrimination against union members and any disadvantageous treatment based on union activities. Managers and employees are members of the labor union at a rate of 75.4%, jumping to 97.6% without managers (as of March 31, 2025).

Based on a common understanding that the Company's sound development, improvements in labor and welfare conditions for employees, and social development are inseparable, the Company and the Union have established a system of Union participation in management based on equality and robust trust between labor and management. The Company and the Union discuss essential management matters in Labor-Management Council.

◇ In Europe

Following an EU directive*4 adopted in 1994, we have set up a voluntary labor agreement to provide a venue for healthy discussion between labor and management. We have also established the Panasonic European Employee Congress (PEEC). Employee representatives and company representatives also meet to exchange opinions and discuss business issues including management strategies and living support for employees.

*4 EU directive: A directive that obliges all companies employing 1,000 or more employees in two or more European Union countries to establish a pan-European labor-management consultation committee.

◇ In China

Nearly all Group-affiliated companies in China have labor unions (gōnghuì). We hold regular opinion exchanges and discussions surrounding compensation, welfare and benefits, training, and the like through initiatives including periodic labor-management dialogues, proactive joint labor-management recreational events, and advance briefings to unions concerning critical management decisions, with a focus on building good relations between labor and management.

Occupational Health and Safety

Realizing a safe and healthy work environment is also a priority, as stipulated in our Human Rights and Labor Policy. Additionally, we are prioritizing our response to the occupational health and safety issues identified as significant human rights concerns through human rights risk assessments conducted by our operating companies. The fiscal 2024 revision of our Human Rights and Labour Policy was meant to respond to ILO's adding occupational health and safety to its Core Labour Standards. For more details, see the "Creating a Safe, Secure, and Healthy Workplace" in the "Maximizing the Potential of Diverse Talent and Organizations" chapter (page 105-).

Managing Working Hours

We have included provisions in our work rules related to proper management of working hours, break times, overtime work, holidays, leave, and other matters based on labor laws in each country and labor-management agreements (e.g. collective bargaining agreements). Our work rules also prohibit forcing workers to work overtime without their agreement as a form of present or suspected forced labor.

In Japan, the standard working day is set at 7.75 hours per day, and any extra hours worked are eligible for extra pay, going beyond the minimum required by law. We have also established internal working hour management standards that are even stricter than legal standards as part of our efforts to eliminate excessive overwork.

We also provide more annual paid leave than legally required, and employees may accumulate up to 50 days of remaining leave. We have made our system more flexible to accommodate individual needs for using annual leave, such as making hourly or half-day leave available.

On top of these system enhancements, we address the physical and mental health management of employees by allocating human resources in ways optimized for preventing uneven overtime workload distributions among specific employees, and by providing additional medical examinations for employees who have worked long hours.

Wage Management

We have established guidelines for compensation system design and aims to achieve competitive compensation levels, wherein we have set guidelines for appropriate wages, allowances, bonuses, and other types of occasional compensation or retirement pay, all based on national laws governing labor, labor-management agreements (such as collective agreements), and the like.

We also establish work rules for each country in compliance with all wage-related laws and regulations concerning minimum wages, statutory benefits, and overtime. We operate according to these regulations, pay employees directly for an agreed-upon period at agreed-upon time and provide employees with notifications of pay through pay statements or electronic data.

Grievance Mechanism

In order for us to respond quickly to remedy any complains related to human rights violations that we receive, we have established a global hotline (supporting 32 languages) as a point of contact to which our employees, business partners, and other stakeholders can report any compliance violations (including human rights or labor violations) they notice or suspect. Reports can be made anonymously, and information about the reports and the reporting person is treated confidentially. We also have internal rules in place to ensure that the internal or external

person reporting the violation is not subject to any form of retaliation or unfair treatment. For more details, see the “Whistleblowing System” in the “Compliance” chapter (page 146-).

In addition, to encourage wider acceptance of complaints from outside our group, we participate in the industry joint grievance platform established by the Japan Electronics and Information Technology Industries Association (JEITA) CSR Committee. For more details, see the “Systems for Whistleblowing and Seeking Consultation” section under “Responsible Supply Chain” chapter (page 115).

🔗 **Japan Center for Engagement and Remedy on Business and Human Rights (JaCER)**

<https://jacer-bhr.org/en/index.html>

Participation in International and Industrial Partnerships

Panasonic Group has been a participant in the United Nations Global Compact since January 2022. We have declared our support for the ten principles in four areas, including human rights and labor, and uphold our accountability by reporting the progress and outcomes of our human rights and labor initiatives in accordance with international standards.

We also joined the Responsible Business Alliance (RBA), an international CSR organization involved in the electronics, ICT, and automotive sectors, in October 2021 and utilize their self-assessment tools and guidance document for solving issues. Furthermore, we participate in the Responsible Mineral Initiative (RMI) under RBA, for the promotion of responsible mineral procurement.

In February 2024, the Group entered into a strategic global partnership with IOM, a specialized UN agency, with a proven track record of assisting in the responsible recruitment and employment of foreign migrant workers in Malaysia—to improve the rights of foreign migrant workers in the supply chain.

In April 2025, we joined the Global Business Initiative on Human Rights (GBI), an international organization that supports corporate efforts to respect human rights. Through collaboration with GBI, we will deepen our understanding of human rights issues facing corporations and strive to continually improve our human rights due diligence.

Panasonic Group is working to build a highly reliable management system through the above efforts.

The Group also actively communicates practical opinions on human rights from a corporate perspective to domestic and international organizations, as well as government agencies. In fiscal 2025, PHD personnel continued to participate in OECD's Sustainable Business Expert Group, Business at OECD (BIAC) and took a leading role as vice-chair of the Corporate

Sustainability Committee of the Japanese Business Council in Europe (JBCE) consistently contributing to government policies related to human rights and due diligence in Europe. In April 2024, we spoke with the European Commission on the Corporate Sustainability Due Diligence Directive. In Japan, we are working to understand the status of primarily European legislation related to human rights due diligence and resolve common issues in the electronics industry through our participation in the Sustainability Due Diligence Working Group under the CSR Committee of the Japan Electronics and Information Technology Industries Association (JEITA). In Malaysia, we continue our dialogue with the National Human Rights Commission (SUHAKAM) on local human rights issues. In March 2025, we agreed to attend a training program in Japan organized by the Ministry of Economy, Trade and Industry (METI) on Promoting Responsible Corporate Conduct in Vietnam. We introduced the Group's initiatives on business and human rights while engaging in discussions with the Vietnam Chamber of Commerce and Industry, as well as executives of Vietnamese electrical and electronic companies that have business with Japanese companies.

🔗 **United Nations Global Compact**

<https://www.unglobalcompact.org/what-is-gc/participants/149557-Panasonic-Corporation>

🔗 **Responsible Business Alliance (RBA)**

<https://www.responsiblebusiness.org/about/members/>

🔗 **Business at OECD (BIAC)**

<https://www.businessatoecd.org/about-us>

🔗 **Japan Business Council in Europe (JBCE)**

<https://www.jbce.org/en/>

🔗 **CSR Committee, Japan Electronics and Information Technology Industries Association (JEITA) (Japanese only)**

<https://home.jeita.or.jp/csr/>

🔗 **The Human Rights Commission of Malaysia (SUHAKAM)**

<https://suhakam.org.my/>

🔗 **GBI (Global Business Initiative on Human Rights)**

<https://gbih.org/>

Maximizing the Potential of Diverse Talent and Organizations Materiality

Panasonic Group is committed to realizing well-being and job satisfaction by creating a work environment where every Panasonic employee^{*1} can work in a safe, secure, and healthy state with their individuality respected and eliminating the risk of infringement on their rights and opportunities through unfair treatment, discrimination, or prejudice. Nurturing and motivating the precious people society entrusts to us is the foundation of our management. We aim to be a company where every employee, regardless of their gender, age, nationality, or other attributes, can Unlock their potential by themselves, by taking bold and positive challenges beyond others' expectations and maximizing their skills and abilities.

*1 Within this section, the following list of stakeholders are collectively referred to as "Employees": (1) all employees having employment relationships with any Panasonic Group company including those working based on the contract with the Group, as well as external contractors and seconded employees working under the control and supervision of any Panasonic Group company; and (2) all board directors, executive officers, executive counselors, fellows, corporate auditors, supervisory board, and corporate advisors or equivalent person appointed by any Panasonic Group company. It also includes employees of key companies subject to some Group HR and other systems.

Policy

Panasonic Group Founder Konosuke Matsushita pursued management that placed significance on nurturing and developing people so that they can thrive based on his philosophy of "develop people before making products." We inherit this philosophy and practice human capital management, rooted in the unwavering core of our Basic Business Philosophy, to maximize the human resources that society entrusts to us as a form of capital.

The Group's management is not conducted solely by top executives. We value "employee entrepreneurship," where each and every employee takes responsibility for their work and approaches tasks with a sense of ownership. Furthermore, we emphasize "participative management through collective wisdom," leveraging the wisdom, diversity, and abilities of all employees in management. Our Basic Business Philosophy outlines how "autonomous responsible management" is attained through both axes of "employee entrepreneurship" and "participative management through collective wisdom."

Moreover, we promote Diversity, Equity, and Inclusion (DEI) Groupwide as we believe diverse viewpoints and values will lead to better decision-making and business growth.

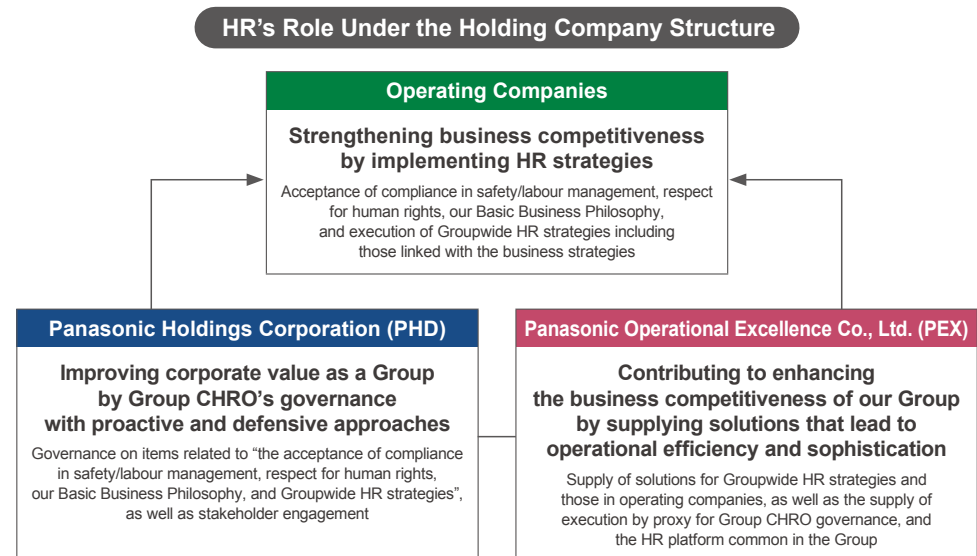
🔗 **Panasonic Holdings Corporation DEI Website: Panasonic Group DEI Policy**
<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/policy.html>

In April 2023, we established the Panasonic Leadership Principles (PLP) as a code of conduct to implement our Basic Business Philosophy. Under these guidelines, every employee, regardless of their rank, aims for a higher level of leadership.

Responsible Executive and Framework

The executive officer responsible for creating and promoting the HR strategy of Panasonic Holdings Corporation ("PHD") and the entire Group is the Group Chief Human Resources Officer ("Group CHRO"). The PHD Strategic Human Resources Department is responsible for planning and formulating strategies across the Group. At the same time, the HR departments at the operating companies and their affiliated divisions have the same responsibilities at the organizational level and manage day-to-day operations.

Under the holding company structure, effective April 2022, each operating company must establish an optimal business structure tailored to its industry, customers, and competitors, in strict compliance with the concept of autonomous responsible management. Each operating company is responsible for planning and executing human resource strategies, including acquiring and developing human resources, building compensation and evaluation systems, and promoting organizational development. Meanwhile, PHD is responsible for supporting the operating companies from the perspective of corporate governance and stakeholder engagement. Panasonic Operational Excellence ("PEX") also assists the operating companies by providing solutions to enhance competitiveness.



The Group CHRO oversees corporate governance through our compliance with safety/labor regulations, respect for human rights, dissemination of the Basic Business Philosophy, and Groupwide HR strategies. To this end, the Group CHRO holds one-on-one meetings with the CHROs of each operating company and reviews their HR strategies, which are then submitted to their respective boards of directors. Moreover, the Group CHRO actively discusses new initiatives in Groupwide HR strategies through reports to the PHD Board of Directors.

Current Challenges

The Group conducts an Employee Opinion Survey annually for approximately 150,000 employees globally. The survey places particular emphasis on employee engagement (the willingness to contribute voluntarily) and employee enablement (placing the right person in the right position and creating comfortable working environments). The favorable response rate to these questions has been steadily increasing due to initiatives such as work style reforms.

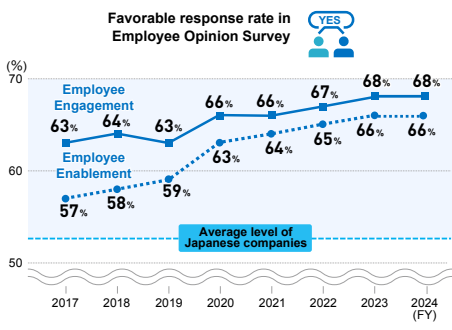
Despite these results being among the highest for Japanese companies, we believe that there is room for improvement to reach the level of top global companies. Upon analyzing the trends in these favorable response rates, we found that two of the nine questions comprising employee engagement and employee enablement have consistently shown low favorable response rates.

These questions involve improving “motivation from the company or supervisors” and “significant barriers at work.” These low favorable response rates indicate there is significant room for improvement in creating an environment where individuals can maximize their potential and feel comfortable taking on new challenges.

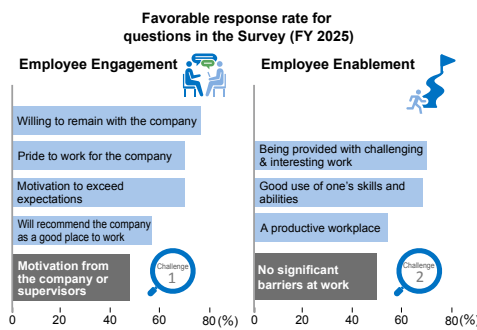
Current Challenges

For further improvement of employee engagement, we have two challenges to focus.

A higher level when compared with other Japanese companies while we still fall short in comparison to the top global companies → Find and focus challenges according to the results of Employee Opinion Survey

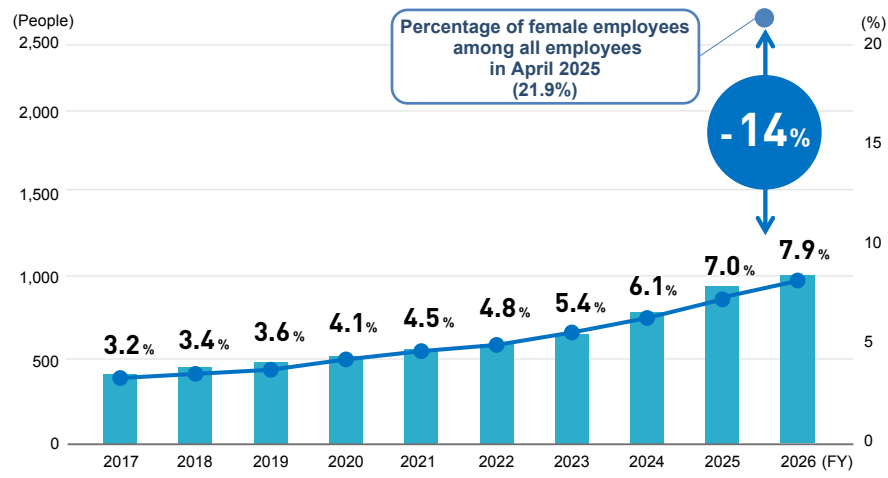


Target: Panasonic Group employees in the global regions



Further analysis reveals that Japan faces particular issues that need to be addressed with regard to female employees, young talent, and mid-career hires. For instance, relatively few female employees responded in the Employee Opinion Survey that they felt they could achieve their career goals within the Group, compared to male employees. We believe that further advancing the placement of women in management and organizational decision-making positions will broaden their career opportunities and lead to high-quality decision-making by diverse leaders.

Changes in Female Manager Ratios



Target: Panasonic Group (Japan: PHD, PEX, and operating companies)

We must also provide opportunities for young talent and mid-career hires to play an active role while maintaining a high level of engagement from the time they join the company. That involves assigning them to decision-making positions soon after their arrival.

At the same time, high productivity is crucial for making informed decisions and implementing effective initiatives. Human capital management is about enabling the people entrusted to us by society to fully utilize their abilities, building highly productive business processes, and fundamentally reviewing fixed cost structures to pursue “best work processes” (one of the PLPs mentioned earlier).

Our Vision

Further accelerating the Group's transformation and growth necessitates that we face the aforementioned challenges head-on, encourage all employees to take on new challenges with enthusiasm, and create an environment where our people and organizations can grow together.

Thus, we have reaffirmed our commitment to be a company where every employee can Unlock their potential by themselves, by taking bold and positive challenges beyond others' expectations and maximizing their skills and abilities, as we aim to realize an ideal society with affluence both in matter and mind.

The Founder, Konosuke Matsushita, once talked of an environment where employees would "be so immersed in work that they would feel an unceasing sense of joy and fulfillment in their work." This flow state is the greatest gift that the Founder believed he could offer to employees, allowing them to take on challenges and maximize their skills and abilities. Our focus on Unlocking potential draws its inspiration from this aspect of Konosuke Matsushita's philosophy.

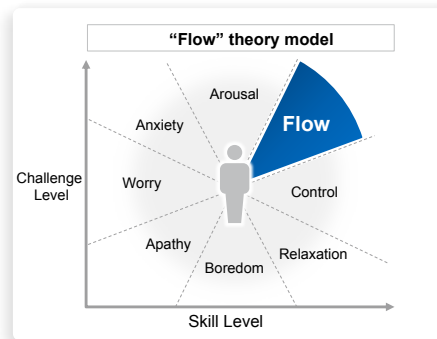
The business will be more successful the more employees execute its strategies in a state of flow. Therefore, we have established our Unlock Indicator to represent the proportion of employees in a flow state, with the global target at 60%.

Our Goals — "Flow" and "UNLOCK"

Toward a company where every employee can "UNLOCK" their potential



To achieve an ideal society, "will" of each individual and the company overlaps to realize the best performance.



The figure above is based on the book by Mihaly Csikszentmihalyi, *Finding Flow: The Psychology Of Engagement With Everyday Life*

Critical Indicators

The Group monitors materialities related to human capital using the following indicators.

Materiality and Indicators Regarding "Maximizing the Potential of Diverse Talent and Organizations"

Materiality	Our vision	Indicators		Current situation	Targets
Organization culture transformation	Employees taking bold and positive challenges and maximizing their skills and abilities	"UNLOCK" indicator	Favorable response rate for both questions in the Employee Opinion Survey, "Motivation from the company or supervisors" and "No significant barriers at work" (Target: Group employees globally)	FY2025: 43%	FY2028: 60% FY2031: 70%
Develop & appoint diverse, transformational leaders	Diverse transformational leaders making high-quality decisions	Diversity ratio of the management team	Diversity of PHD Executive Officers (Total ratios of female, non-Japanese citizens and mid-career hires)	April 2025: 54%	More than half
		Ratio of female managers	Female ratio in management positions (in Japan)	April 2025: 7.9%	April 2028: 12% April 2031: 16%
Safe, secure and healthy work environment	Operating with a safe, secure, and healthy environment as a prerequisite	The number of serious accidents	Number of fatal accidents or accidents resulting in long-lasting physical disabilities	7	Zero
		The number of major accidents	Number of accidents affecting at least three people	0	Zero

As mentioned earlier, we have established our critical Unlock indicators based on the two issues identified through the Employee Opinion Survey, aiming to transform our organization culture so that employees take bold and positive challenges and maximize their skills and abilities.

Developing and appointing diverse, transformational leaders who will shape the future involves setting diversity ratios (tracking women, non-Japanese citizens, and mid-career hires) within all Group company management teams as key indicators to achieve high-quality decision-making across management. Women are highly underrepresented in the Group's management in Japan, despite demonstrating no difference in ability based on their gender. We have identified the ratio of women in management as a critical indicator, given our recognition of this underrepresentation as a key challenge in advancing DEI, which aims to leverage differences as strengths to create new value.

We have set targets to reduce the number of serious and major accidents, ensuring that we operate in a safe, secure, and healthy environment as a prerequisite.

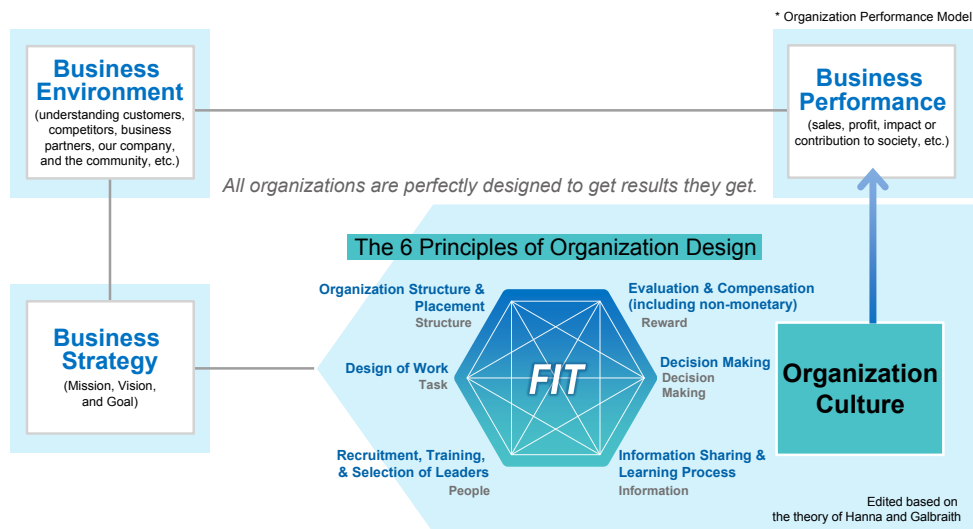
Additionally, we monitor EBITDA^{*2} divided by personnel expenses within the Group in order to have "the best work processes" by enhancing value-added labor productivity.

*2 EBITDA: The total of operating profit, depreciation (tangible/right-of-use assets), and amortization (intangible assets)

Organization Culture Transformation

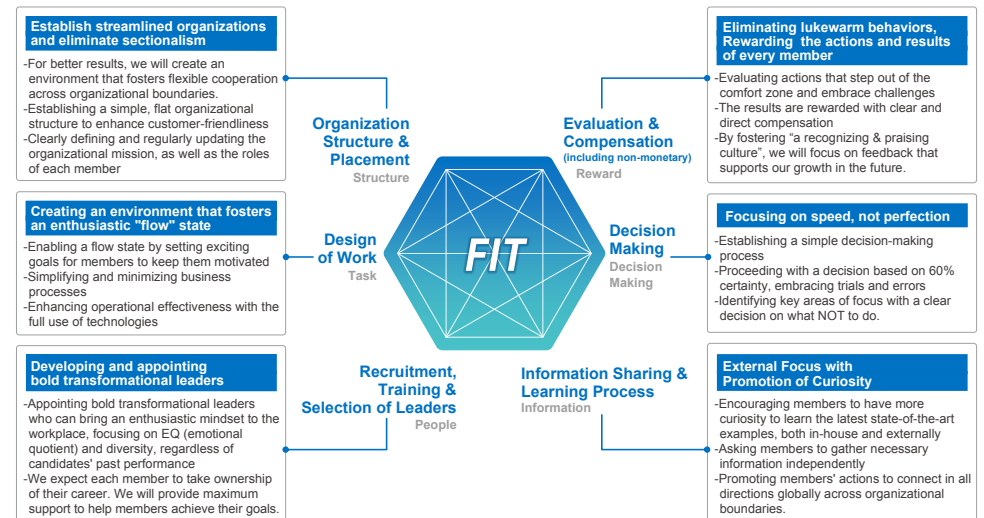
Organization culture should not be left to develop naturally, but rather should be intentionally designed to maximize business results. No matter how great a strategy is, people must execute it. The outcome of a strategy is significantly influenced by the actions of each individual and the organization's structure. Employees will not be able to take on challenges or grow if they cannot unlock their potential. The organization will not be able to fully leverage its collective strength if its strategy is not aligned with a culture that encourages behavioral change. Therefore, we have utilized the Organization Performance Model (OPM) framework to develop the Group's 6 Principles of Organization Design, which define the type of organization culture we aspire to achieve.

Framework to Design Organization Culture (OPM*)



The 6 Principles of Organization Design function effectively only when they are interconnected and consistent with one another, supporting the entire organization's growth. For example, we must reward employees appropriately and with a sense of balance based on the principle of Evaluation and Compensation. The Information Sharing & Learning Process principle encourages a shift away from inward-looking attitudes and ignites curiosity. Recruitment, Training, & Selection of Leaders emphasizes developing diverse, transformational leaders and boldly promoting them. We then design jobs that enable these leaders to support their team members in tackling challenges and provide an environment where they can work enthusiastically in a state of flow. We integrate these elements as we strive to help people and the organization grow together, leading to business results.

Organization Culture Transformation — The 6 Principles of Organization Design in Panasonic Group —



Illustrative Example: Mobile Solutions Business Division, Panasonic Connect Co., Ltd.

The Mobile Solutions Division, which handles notebook PCs, is promoting reforms based on selective focus on projects, aiming to achieve profit-oriented management. All employees understand the strategy of tying the profit generated through reforms to new growth. Disclosing management figures and making the organization flatter are accelerating decision-making. The team is integrating the knowledge gained from its diverse human resources through clear salary increases, promotions, and personnel mobility.

🔗 **Panasonic Holdings Corporation Website: Human Capital Management**

<https://holdings.panasonic/global/corporate/sustainability/human-capital-management.html>

Illustrative Example: China & Northeast Asia Company, Panasonic Corporation

Under a past policy of "decisions on China are made by China," the China & Northeast Asia Company (CNA) addresses organizational design while incorporating the views of its 4,000 employees. It emphasizes the practice of making decisions based on the slogan "China Speed, China Cost, and China Style." The aim is to create a frontline-adjacent decision-making framework that enables the organization to respond agilely to market and customer changes. The company is also actively promoting local employees to leadership positions and learning from other companies to accelerate organizational growth.

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<https://holdings.panasonic/global/corporate/sustainability/human-capital-management.html>

■ Organization Structure & Placement

Personnel Optimization as Part of Group Management Reforms

The 6 Principles of Organization Design prescribe that the organizational structure and placement should always be flat and straightforward from the customer's perspective, and that evaluation and compensation should be based on individual results and actions. The aim is to enable all employees entrusted to us by society to utilize their abilities to the fullest. We will develop highly productive business processes that leverage data and technologies, including generative AI. Simultaneously, in fiscal 2026, we will optimize our personnel placement in each global region as part of the Group's management reform. We will also create a lean and environmentally resilient corporate structure to facilitate the Group's sustainable growth, while maintaining strict control over sustainable personnel counts.

■ Evaluation & Compensation

Framework for Rewarding Results and Behavior (Japan)^{*3}

The Group determines the Role/Grade System that forms the basis of employee compensation based on the responsibilities of each individual's role. This system aims to compensate the Group's diverse employees based on the scope of their work and responsibilities. This approach helps enhance the transparency of our human resources systems and fosters a greater understanding among employees. Clarifying goals for new challenges encourages people and organizations to take on these challenges boldly, without fear of failure.

We conduct annual evaluations of each employee's actions and achievements in relation to the goals they have set for themselves. These evaluations involve engaging employees and their supervisors in dialogue to ensure that employees understand their evaluations and to foster a desire to take on further challenges.

We have adopted a performance-linked compensation system that sets bonuses for the current fiscal year based on corporate performance during the previous fiscal year. Corporate performance is reflected in compensation more at higher levels of management. Moreover, individual bonuses are determined based on an individual's performance in their job during the previous fiscal year. With corporate and individual performance impacting compensation to some degree, Panasonic inspires the desire to improve both aspects of performance.

All Group companies implement or revise their systems by tailoring them to their respective industries and markets, such as introducing job-based talent management.

^{*3} This framework for rewarding results and behavior applies to all employees with indefinite employment contracts at PHD, PEX, and six operating companies.

Illustrative Example: Job-Based Talent Management, Panasonic Industry Co., Ltd.

Panasonic Industry introduced essential criteria for roles and human resources, along with a two-tier grading system, to encourage employees to take on new challenges. "The Job Description," essential criteria for roles and human resources, clarifies job requirements using internal and external perspectives, creating an environment where employees can proactively choose their own career paths. Panasonic Industry has also introduced a two-tier grading system for management and specialists to support employees in building flexible career paths.

🔗 **Panasonic Holdings Corporation Website: Human Capital Management**
<https://holdings.panasonic/global/corporate/sustainability/human-capital-management.html>

■ Information Sharing & Learning Process

Employee Resource Groups (ERG)^{*4}

Employees from across the Group's operating companies and job titles voluntarily form communities based on common interests or concerns. They engage in various activities, driven by a desire to improve the workplace environment, organization, and management. Community themes are diverse, encompassing childcare, long-term care, disabilities, gender, LGBTQ+ issues, mid-career hires, business model development, and technology innovation. For each employee, their involvement leads to them making suggestions to the company, participating in management, solving problems, and creating a place for themselves. For the company, ERGs help address management issues, encourage innovation, enhance the workplace environment, mitigate turnover risk, and boost employee motivation. The company values these voluntary efforts by employees.

^{*4} Employee Resource Group (ERG) refers to organizations or groups of employees who share the same values and beliefs and actively engage in activities across operating companies and departments.

Alumni Community (Japan)

In April 2024, we launched the Panasonic Group Alumni Community to maintain connections and encourage collaborative co-creation with alumni (retired employees). The initiative aims to reexamine the relationship between the company and its alumni, which is often severed due to retirement, and build a new relationship between the company and individuals that does not end with retirement, thereby generating collaborative co-creation. As of May 2025, over 500 alumni have registered, and we will continue to create various opportunities for future encounters. Furthermore, this initiative is catalyzing the Group's recognition as a company to which people want to return. With 27 people having returned to us in fiscal 2025, we are already seeing the benefits of the Alumni Community.

☑ Panasonic Group Alumni Community Launches Fully Operational (Japanese only)

<https://news.panasonic.com/jp/press/jn240410-3>

☑ Alumni Research Institute, Japan Alumni Award 2024 (Japanese only)

<https://alumni-lab.jp/jaa2024>

☑ Panasonic Holdings Corporation DEI Website: Community Efforts

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/inclusive/community.html>

■ Recruitment, Training & Selection of Leaders

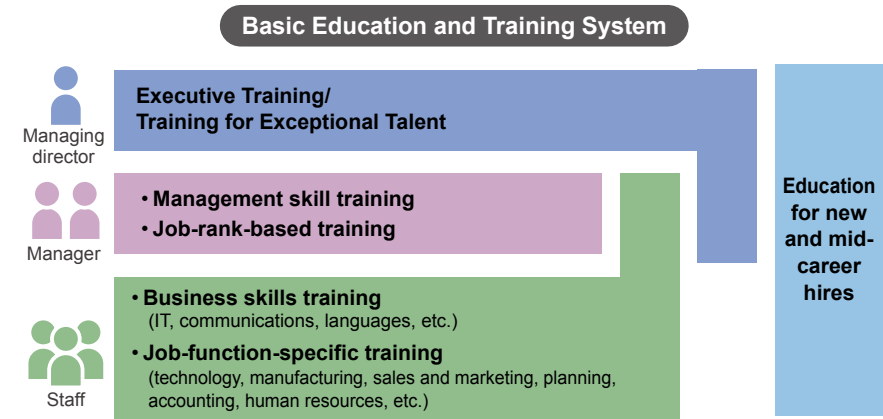
Global Recruitment Screening Based on Our Code of Conduct

Starting fiscal 2025, we introduced a global recruitment screening process based on the Panasonic Leadership Principles (PLP), our Code of Conduct for implementing the Group's Basic Business Philosophy. Our goal is to recruit individuals who align with our Basic Business Philosophy and are capable of implementing it effectively. Specifically, we are designing a screening process that utilizes selection criteria based on the PLP and standard models for conducting interviews. We are implementing them in each country, region, and company, tailored to their unique labor markets and business environments. Prioritizing action allows us to attract a diverse range of talent without bias toward specific attributes.

[Social Data: Career and human resources development data \(Recruitment\), page 139](#)

Basic Human Resource Development System

Nurturing and motivating the precious people society entrusts to us is the foundation of our management. The Group's human resource development system offers a wide range of programs tailored to different levels and job types; however, we believe that the driving force behind these programs should come from within each workplace. At each workplace, we encourage employees to develop a growth mindset through one-on-one meetings with their supervisors. Daily, detailed on-the-job training (OJT) forms the foundation of talent development. Effectively combining OJT with group training complements and reinforces the knowledge, skills, and experience necessary for growth. Rather than the company providing educational opportunities unilaterally, we support employees in clearly envisioning their ideal selves and actively pursuing learning opportunities to achieve those goals.



Global Human Resource Development

In each country and region, we plan and operate our unique selective executive development training programs in cooperation with Japan to bolster our business leadership development. For instance, in Europe, we operate the Next Generation Talent Program (NGTP), a 12-month human resources training program. It includes workshops on our Basic Business Philosophy and diversity, launching and promoting actual business projects, mentoring and coaching, as well as various other activities. Participants collaborate with partners from multiple European affiliates to enhance their overall business knowledge and skills. We also run the Middle Management Development Program (MMDP) in India. In fiscal 2025, we partnered with the Indian Institute of Management to develop a training curriculum, which was attended by 27 employees, mainly from India, with some from Turkey and other countries. In Japan, we hold the Senior Management Development Program (SMDP) for key senior managers (including directors, general managers, and managers) worldwide, with 34 participants from 13 countries attending the most recent program in August 2024. Furthermore, we have a Groupwide Panasonic Global Mobility Policy that provides guidelines for inter-regional transfers and programs for overseas employees to work in Japan.

Resilience Training

We introduced a Resilience Program in fiscal 2022 to maximize each individual's potential and foster resilient people and organizations through a deeper understanding of human nature. The program is structured around three pillars: peak performance, resilience, and integration. Drawing on medical and psychological insights, participants learn how to enhance individual performance, transform adversity into growth for themselves and their organizations, and foster a diverse and inclusive work environment. Employees who have enhanced their resilience through this program are taking the lead in forming teams to tackle challenging projects with

common goals, accelerating initiatives that integrate development, manufacturing, and sales, and developing new products by bringing together the expertise of diverse job types, among other notable achievements.

🔗 **Panasonic Holdings Corporation Website: Human Capital Management**

<https://holdings.panasonic/global/corporate/sustainability/human-capital-management.html>

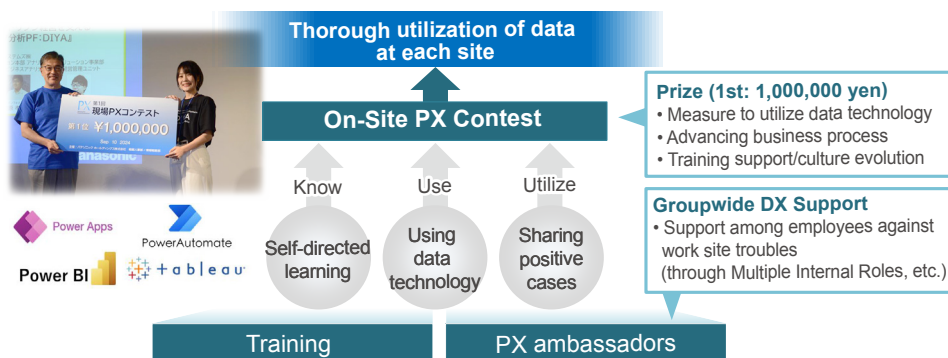
Fostering Individuals Who Can Utilize Data and Technology

The Group is focusing on developing human resources capable of utilizing data and technology as part of Panasonic Transformation (PX), driving corporate transformation centered on DX. Under the PX Ambassador program, employees who volunteer to participate support issue resolution in the workplace. As of March 2025, 62 employees have volunteered across the Group, having resolved over 170 issues to date. We also promote the On-Site PX Contest, where we solicit PX case studies from across the company. In fiscal 2025, 803 entries were submitted, with a total of 1,112 employees receiving awards.

🔗 **Panasonic Holdings Corporation Website: Human Capital Management**

<https://holdings.panasonic/global/corporate/sustainability/human-capital-management.html>

Fostering Individuals Who Can Utilize Data and Technology



Work Design

Work design refers to creating an environment that motivates each individual to remain engaged in their work. The Group believes it is essential that we provide opportunities for each individual to take on challenges that contribute to society voluntarily while supporting them to the fullest extent possible. To this end, we are promoting initiatives in Japan, such as A Better Dialogue (a dialogue between employees and their supervisors), internal open recruitment, career and life design seminars, and career counseling. We are also promoting global mobility worldwide.

[Social Data: Other human resources systems and measures, page139](#)

Voluntary Challenges and Self-Directed Career Support (Internal Open Recruitment; Japan)

Internal open recruitment is one framework that supports each individual's desire to take on challenges voluntarily and direct how their career develops. Groupwide programs include e-Challenge, e-Appeal Challenge, and Multiple Internal Roles, and our organizations remain open to the recruitment system even after becoming operating companies.

In fact, some operating companies are even creating their own open recruitment programs. Panasonic Industry, Panasonic Connect, and Panasonic Housing Solutions have introduced an open recruitment process for transfers and promotions, enabling employees who meet the eligibility criteria to apply for positions such as department managers or higher-level roles.

In fiscal 2025, a total of 3,211 employees applied through both Groupwide and operating company-specific programs, with 1,420 employees transferring. An additional 33 employees took on the challenge of having Multiple Internal Roles.

[Social Data: Career and human resources development data \(Internal open recruitment\), page 139](#)

Developing and Appointing Diverse, Transformational Leaders Who Will Shape the Future

Formulating Succession Plans and Nurturing Successors

High-quality decision-making is crucial for achieving an ideal society with affluence both in matter and mind through sustainable business growth. Therefore, nurturing and promoting diverse transformational leaders is indispensable. The Group places importance on experience (e.g., business management, management of overseas bases, or business creation) and knowledge and skills (e.g., decision-making, judgment, strategic planning, and execution) in addition to the leadership behaviors outlined in Panasonic Leadership Principles when developing successors for management positions.

Meanwhile, the increasingly uncertain business environment means it is more important than ever to have leaders who can boldly envision an ideal future, make high-quality decisions by leveraging diverse perspectives, and drive change. We aim to continuously develop such leaders by formulating talent requirements and succession plans for all critical positions within the group while intentionally identifying, developing, and monitoring successors over the medium to long term.

To this end, we have established a Talent Management Committee to clarify the talent

requirements for key positions and implement a systematic approach to developing and placing next-generation leaders. This committee identifies, develops, and monitors successors from short-, medium-, and long-term perspectives.

The Group offers two paths to management positions. We have established individual platforms for grooming successors, through which we are promoting this initiative.

Frameworks of Successor Development

Framework of Management	Type of successors	Meeting for Discussion and Decision-Making	Common Functions
Top Management (Presidents of Operating Companies/ Division Companies, and PHD Executive Officers)	H talent	Group Talent Management Committee	<ul style="list-style-type: none"> • Early Identification • Assessment
Levels of Business Operation (Executive Officers of Operating Companies, Members of Management Meeting in Division Companies)	G talent	Talent Management Committee of Each Company	<ul style="list-style-type: none"> • Monitoring • Discussion/ Decision-Making

Of these, we have identified candidates for top management positions as immediately eligible, eligible within five years, and eligible within ten years, having formulated a training plan for a total of 23 important positions. We are also accelerating the development of next-generation leaders by offering comprehensive successor development programs, including global executive development training in collaboration with each region, as well as selective training aimed at identifying young talent at an early stage.

[Social Data: Career and human resources development data \(Progress in preparing successors\), page139](#)

Successor Training

We have made available the best internal and external training programs for successors, and we continue to hold programs such as Launching Executive Leaders and Creating Executive Leaders, which launched in fiscal 2021. A total of 177 people (over 16 days) have participated in the former program and 251 people (over 14 days) in the latter. Furthermore, in fiscal 2022, we initiated training programs for newly appointed executives and a group management study group. In fiscal 2023, we expanded the programs by adding management literacy training for young executive candidates. Starting in fiscal 2025, we expanded our scope beyond business division leaders to include executive officer candidates, with a focus on developing management teams.

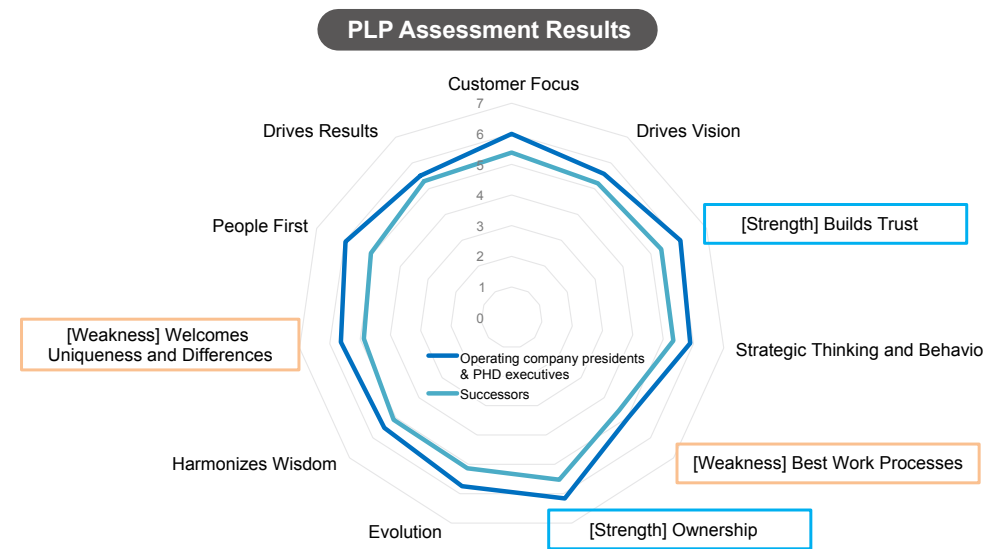
[Social Data: Other human resources systems and measures, page139](#)

Monitoring the Development of Executives

The Group conducts a Panasonic Leadership Principles (PLP) Assessment (a 360-degree

assessment) for current operating company presidents, PHD executives, and some other operating company executives. This assessment has superiors, peers, and subordinates evaluate the extent to which leaders demonstrate leadership behaviors based on the PLP—a code of conduct that underpins how we practice our Basic Business Philosophy. Once a year, participants have the opportunity to reflect on their behavior and how they can change it based on the perceptions of their daily actions by those around them. Moreover, the assessment is conducted for personnel who are immediately eligible, eligible within five years, and eligible within ten years for top management positions, allowing us to develop our next generation.

The results of our fiscal 2025 PLP Assessment are outlined below. They indicate that both current executives and the next generation of top management demonstrate strengths in “Builds Trust” and “Ownership.” On the other hand, their areas of improvement are clearly in “Best Work Processes” and “Welcomes Uniqueness and Differences.” Our focus will be on strengthening these areas in the executive development process.



■ Bringing in and Developing Women for Leadership (Japan)

In Japan, we are also focusing on bringing in and systematically developing women for leadership. Panasonic Group's compensation systems do not exhibit any disparities based on gender, gender identification, or other individual attributes. However, it remains true that we have fewer women promoted to executive teams or management positions compared to men. Looking ahead, we are working to attract and systematically develop female leaders through measures such as enhancing recruitment, expanding work options, and supporting career

development. We aim to leverage the wisdom of a more diverse group of employees to create innovative products and services. We are also reviewing the equity of our evaluation and promotion systems, offering stretch opportunities, and creating occasions for employees to learn about the values and work perspectives of their role models.

🔗 **Panasonic Holdings Corporation DEI Website: Gender Equity**

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/support-gender-equality.html>

Social Data: Data on diversity and work styles (Managerial diversity, Gender wage gap), page138

Illustrative Example: Eliminating the Gender Gap at Manufacturing Sites, Electric Works Company, Panasonic Corporation

Manufacturing has a strong unconscious bias that certain jobs and leadership roles, such as safety management, machine operation, and troubleshooting, are challenging for women because they are perceived as requiring rapid responses and physical strength. This bias has led to workplaces with many people who share similar views. Thus, we brought women in leadership at manufacturing sites across Japan to our Women Leaders Talk. The goal is to eliminate gender gaps and enhance the working environment in manufacturing sites, enabling all employees to thrive.

🔗 **Panasonic Holdings Corporation Website: Human Capital Management**

<https://holdings.panasonic/global/corporate/sustainability/human-capital-management.html>

■ Diversity, Equity & Inclusion Initiatives

Top Management Commitment

Our top management is committed to promoting DEI by incorporating it into business strategies. The Group CEO serves as chairperson of the Group DEI Promotion Council, which meets regularly and is attended by operating company presidents and employees. The committee decides on and implements key actions through dialogue between management and employees. Additionally, DEI reports are regularly presented as part of our HR strategy at PHD Board of Directors meetings.

🔗 **Panasonic Holdings Corporation DEI Website: Top Management Commitment**

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/top-commitment.html>

Creating Inclusive Workplace Environments (Japan)

Creating an inclusive workplace environment means respecting the diverse personalities of each individual and creating a workplace where they can thrive.

◇ Unconscious Bias Training

We continually conduct Unconscious Bias Training for approximately 60,000 employees

in Japan, enabling them to learn about and become aware of the unconscious biases that everyone possesses. Changing one-sided perspectives and considering alternative possibilities enables employees to reassess their workplace communication, fostering a culture where everyone can work comfortably and diversity can thrive. We have rolled out this training to North America, Europe, Brazil, India, Singapore, and Vietnam, tailoring it to the specific circumstances of each region and country.

🔗 **Panasonic Holdings Corporation DEI Website: Unconscious Bias Training**

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/inclusive/unconscious-bias-training.html>

◇ Accessibility Map Initiatives

We are working to prepare accessibility maps for our Group facilities. We involve employees with disabilities and their colleagues in creating these maps, conducting on-site surveys themselves. We view the creation process itself as an opportunity to understand diversity.

🔗 **Panasonic Holdings Corporation Website: Human Capital Management**

<https://holdings.panasonic/global/corporate/sustainability/human-capital-management.html>

Supporting Every Individual

Supporting every individual means helping all of our diverse employees face their challenges. We are working to build support systems and improve Human Resources systems and structures.

◇ Promoting Diverse Work Styles and Supporting Employees Who Are Pregnant, Raising Children, or Caring for Family Members

All Group companies are working to expand work options that support careers and encourage work-life balance. For example, we have introduced a system that allows employees to flexibly choose their working hours and days by eliminating the minimum daily working hours, enabling flexible work styles such as three- or four- day workweeks. By introducing such work styles and expanding the scheduling system for career development, we encourage individuals to take on the challenge of self-directed career development, including Side Jobs for other companies, volunteering, and self-learning. We are also working to expand options for working locations, such as by promoting full remote work, which allows employees to work from outside their commuting range. That allows employees to balance their careers with life events such as childcare, nursing care, or a partner's relocation.

The Group allows all employees to take annual paid leave in half-day or hourly increments, regardless of their work style or position. We have also made it possible for employees to take leave during regular working hours and allocate their paid leave on an hourly basis. Expanding these various systems supports more diverse and flexible work styles.

🔗 **Panasonic Holdings Corporation DEI Website: Diverse Work Styles & Work-Life Balance**

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/support-worklifebalance.html>

[Social Data: Data on diversity and work styles \(Childcare leave utilization, Annual paid leave days taken & utilization rate, and Work styles\), page 138](#)

◇ LGBTQ+

Panasonic Group Code of Ethics & Compliance, in accordance with the laws and regulations of all countries in which we operate, clearly prohibits all discrimination or conduct that may result in discrimination based on sexual orientation, gender identity, or gender expression. Since April 2016, Panasonic Group has treated same-sex domestic partners as equivalent to legal spouses within its HR systems—including bereavement leave, childcare and nursing care support, and temporary solo relocation allowances—except in areas where such recognition is not applicable due to legal restrictions. To promote understanding of LGBTQ+ individuals and create more LGBTQ+-friendly workplaces, Panasonic has been actively conducting training and raising awareness about basic knowledge of LGBTQ+ individuals, methods for dealing with discriminatory speech or conduct, and responses that meet the needs of those involved.

🔗 **Panasonic Holdings Corporation DEI Website: LGBTQ+**

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/support-lgbtq.html>

◇ People with Disabilities

As of June 2025, the total proportion of Group employees in Japan who have disabilities was 2.53%. Individual workplaces are implementing initiatives to create environments where everyone can work in a way that suits them, regardless of whether they have a disability or not. These initiatives include ensuring access to information for people with hearing impairments, creating barrier-free environments, and developing educational content. We will continue our efforts to promote independence and participation in society among people with disabilities.

🔗 **Panasonic Holdings Corporation DEI Website: People with Disabilities**

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/support-handicapped.html>

[Social Data: Data on diversity and work styles \(Employed people with disabilities\), page 138](#)

◇ Post-Retirement Age Workers

We are working to create an environment where post-retirement age employees can thrive at all Group companies by promoting self-directed career development, securing employment opportunities for this demographic, and providing support after retirement.

🔗 **Panasonic Holdings Corporation DEI Website: Post-Retirement Age Workers**

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/support-elderly-employment.html>

◇ Global Initiatives

We are pursuing DEI promotion initiatives tailored to the specific issues faced by each global region, enabling diverse human resources to maximize their capabilities.

🔗 **Panasonic Holdings Corporation DEI Website: Global Initiatives**

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/global-initiatives.html>

For other information, click here:

🔗 **Panasonic Holdings Corporation DEI Website:**

<https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion.html>

HR Modernization

HR modernization is an initiative that leverages cutting-edge technology and data to evolve the way employees work and how talent is managed. We will utilize HR data and generative AI to enhance the value of the experience for all employees working for the Panasonic Group, while optimizing organizational and talent management. Moreover, we will evolve our HR functions into a professional group that supports business strategy by standardizing HR operational processes and making them more efficient. Creating an environment where each employee can focus on more creative work will maximize the potential of each employee. Meanwhile, sharing these results across the entire Group will fuel employee growth and greater organizational competitiveness.

For instance, we will use AI to propose optimal training and new positions within the company based on the skill data of each employee, opening up more career options for them. We will also work to ensure that the right people are in the right positions by leveraging AI to quickly find candidates from within and outside the company who are suitable for vacant positions.

This increased use of cutting-edge technology in human resources fields will raise the number of employees managed by each FTE^{*5} in human resources and the ratio of human resources employees responsible for human resources strategy and organizational and human resource development to be on par with other leading global companies.

^{*5}FTE, an abbreviation for "Full-Time Equivalent", is the amount of work equivalent to full-time work. A ratio of 1.0 represents the amount of work performed by one full-time employee.

◇ One-Stop HR Service, a Generative AI-Based Platform for 70,000 Employees

We have introduced our One-Stop HR Service web portal to consolidate dispersed human resources information and contact points. The portal provides multiple support tools, including a My Pages feature that displays personalized announcements and to-do lists, a Virtual Agent with AI chatbots for automated responses and applications, and a Metaverse that offers a new form of face-to-face communication for enhanced reassurance. These tools strike a balance between the convenience of self-service and the reassurance of human support. In fiscal 2025, approximately 19,000 employees accessed their My Pages to use the service on a monthly basis. With more continual use, the service is becoming more convenient and improving operational efficiency.

🔗 **Panasonic Holdings Corporation Website: Human Capital Management**

<https://holdings.panasonic/global/corporate/sustainability/human-capital-management.html>

◇ **AI Career Supporter, a Conversational AI Service**

We have built a platform where students seeking employment can receive career advice at any time, anywhere, when they become interested in the Group. Students can articulate their thoughts through dialogue with AI, pursue deeper self-reflection, and discover a direction for their careers. The AI also proposes optimal internship themes from hundreds of workplace internship programs based on students' majors, preferences, and behavioral characteristics. As of June 2025, approximately 2,700 students have utilized the service, which has been rated highly in surveys.

🔗 **Panasonic Holdings Corporation Website: Human Capital Management**

<https://holdings.panasonic/global/corporate/sustainability/human-capital-management.html>

Creating a Safe, Secure, and Healthy Workplace

We have established the Panasonic Group Code of Ethics & Compliance ("Code of Ethics & Compliance") and the Panasonic Group Occupational Health and Safety Policy ("Occupational Health and Safety Policy") to ensure the health and safety of all employees working within the Panasonic Group. We implement these across the Group, including for subcontractors and other companies operating within our facilities. PHD's Board of Directors formulates and revises the Code of Ethics & Compliance, while the Group CEO issues the Occupational Health and Safety Policy. We also strive to ensure the safety of all persons not affiliated with Panasonic when they visit our workplaces.

🔗 **1. Respecting each other, 2. Safeguarding health and safety, Chapter 2. Our Workplace, Panasonic Group Code of Ethics & Compliance**

<https://holdings.panasonic/global/corporate/about/code-of-conduct/chapter-2.html>

🔗 **Panasonic Group Human Rights and Labour Policy**

<https://holdings.panasonic/global/corporate/sustainability/social/human-rights/policy.html>

🔗 **Panasonic Group Occupational Health and Safety Policy**

<https://holdings.panasonic/global/corporate/sustainability/social/health-and-safety/policy.html>

To implement this policy, we have established the Safety and Health Management Rules to define safety and health management for all relevant work at all business sites within the Group. These Rules establish a foundation for safety and health management activities, prevent occupational accidents, promote the health and well-being of our employees, and contribute to business development. Additionally, we work to prevent harassment in accordance with the laws and regulations of each region, ensuring thorough compliance with these standards.

We also ensure that everyone across the Group, both domestically and abroad, is well-informed about our initiatives by distributing messages about the year's events from the Group Health

and Safety Management division during National Safety Week in July and National Occupational Health Week in October each year.

■ Creating a Safe and Secure Workplace

Risk Assessment Initiatives (Japan)

The Panasonic Group conducts regular risk assessments at least once a year for machinery, equipment, and hazardous substances, in accordance with the provisions of the Occupational Health and Safety Act, to identify hidden risks such as the potential for industrial accidents, injuries, or illnesses, and reliably mitigate these risks in order of greatest priority. Moreover, we promptly share cases of occupational accidents that have occurred within the Group via the intranet, deploy countermeasures across the Group, and conduct activities to prevent recurrence at all workplaces. Each of our business sites in Japan has a Health and Safety Committee composed of both employees and management (representatives of the union committee and the company committee) and charged with investigating measures to decrease risks at workplaces, prevent the causes and recurrence of industrial accidents, promote the maintenance or improvement of workers' health, and prevent harm to workers' health. To prevent industrial accidents among employees of contractors operating on our premises, we also require that all contracts include provisions for ensuring a safe and appropriate workplace environment. We regularly hold Health and Safety Meetings with these contractors and manage overall health and safety, including facilitating communication between operations.

Promoting External Certification

◇ **ISO 45001**

Workplaces within the Panasonic Group are working to obtain and implement ISO 45001 certification. This process involves clarifying the roles of all employees using the standard while setting goals and driving forward health and safety activities. Site general managers must also conduct regular reviews, revising their operations accordingly based on the results of those reviews. As of December 31, 2024, 172 of the Group's 217 manufacturing sites globally have obtained ISO 45001 certification, with five sites scheduled to obtain accreditation in fiscal 2026.

◇ **Outstanding Organization for Health and Productivity (Japan)**

In Japan, the Group has been working toward being recognized as an Outstanding Organization for Health and Productivity by the Ministry of Economy, Trade and Industry. As of March 2025, all Group operating companies have received this certification for three consecutive years.

Furthermore, three Group companies have been recognized as White 500 companies (the top 500 companies with notably outstanding initiatives



within the large enterprise category of the Outstanding Organization for Health and Productivity certification). The Group positions health and productivity management as a key measure of management that enables all employees to reach their full potential. It promotes the mental and physical well-being of our employees and their families while fostering a workplace culture that supports the growth and development of all employees.

◇ List of Panasonic Group Workplace Recognitions in 2025 (Japanese only)

<https://phio.panasonic.co.jp/health/excellentList/index.html>

◇ WELL Certification*⁶

The Panasonic Group has received the following international certifications for creating well-being-oriented workplaces where all employees can perform at their best.

- Jan. 2022: Panasonic Yizhuang Manufacturing (Beijing, China) WELL Health Safety Rating
- Jan. 2022: Matsushita Memorial Museum (Beijing, China) WELL Health Safety Rating
- Jan. 2022: Panasonic System Communication Company (Beijing, China) WELL Health Safety Rating
- Mar. 2022: Panasonic Tokyo Shiodome Building (Tokyo, Japan) WELL Health Safety Rating
- July 2022: Panasonic Hiroshima Nakamachi Building (Hiroshima, Japan) WELL Health Safety Rating
- Jan. 2023: Panasonic Wellness Smart Town (WST) Showroom (Jiangsu, China) WELL Performance Rating
- May 2023: Panasonic Electric Equipment (Jiangsu, China) WELLv2 Platinum
- Aug. 2023: Panasonic Wellness Smart Town (WST) Showroom (Beijing, China) WELL Performance Rating
- Jan. 2024: WELL Core Silver Certification, XC Kadoma, Panasonic Operational Excellence, Japan
- Jul. 2024: WELL v2 Platinum Certification, System Solutions Development Center, Panasonic Electric Works Company, Japan
- Feb. 2025: WELL v2 Pre-Certification, the new Kadoma building, Technology Division, Japan
- Mar. 2025: WELL v2 Platinum Certification, Shiomer, Solutions Development Division, Panasonic Electric Works Company, Japan
- June. 2025: WELL v2 Platinum Certification, worXlab, Solution Engineering Division, Panasonic Electric Works Company, Japan

*⁶ Established in 2014 by the U.S.-based International WELL Building Institute (IWBI), a public benefit corporation, this is an office space assessment system that aims to create better living environments by incorporating the perspective of “human health” into the design, structure, and use of spaces. There are four certification levels in WELLv2: Platinum, Gold, Silver, and Bronze. The WELL Health Safety Rating evaluates the health and safety of a space, while the WELL Performance Rating assesses the indoor environmental quality, including factors such as light, sound, and air quality. There are no certification levels except for WELLv2.



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Safety

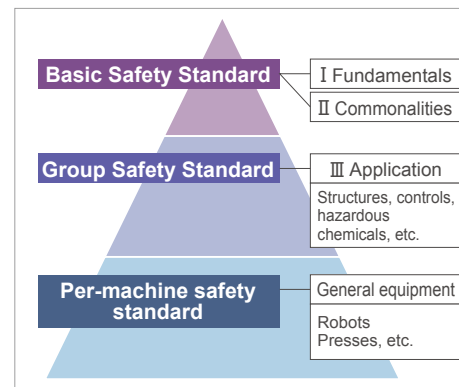
◇ Developing the Guidelines for Formulating Equipment Safety Standards

To prevent occupational accidents involving equipment, we identify risks and implement protective measures during the equipment design stage based on the Equipment Safety Standards. This process occurs whenever we develop, introduce, or purchase new production equipment or technology/quality evaluation equipment and devices at our business sites. After multiple conformity assessments using our proprietary evaluation tools, the Health and Safety Committee reviews the conformity assessment at the final use stage, ensuring that we use equipment that meets safety standards. The Guidelines for Formulating Equipment Safety Standards apply globally to all business sites' Equipment Safety Standards. These guidelines systematize international machinery safety standards, laws, and regulations, as well as safety expertise garnered throughout the company, and measures to prevent the recurrence of accidents. The Equipment Safety Standards Revision Committee, comprising experts from production technology, human resources, and safety departments across all Group companies, meets annually to discuss revisions, update provisions, and publicize the standards (translated into multiple languages). Additionally, we conduct compatibility assessments of hazards to identify potential risks arising from mismatches between human behavior and capabilities, and implement ergonomic considerations into working environments to ensure safe working conditions.

System of Guidelines for Formulating Equipment Safety Standards

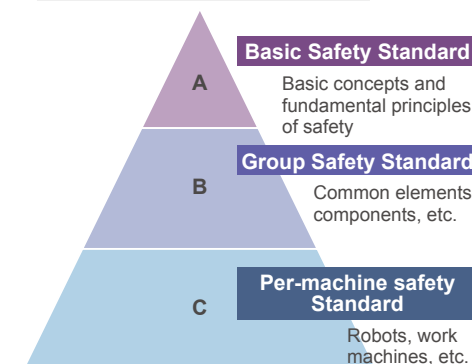
Diagram of the Equipment Safety Standards at Panasonic

- Uses the same system of standards at International Safety Standards 10S/IEC (Guide 51)
- Annually reviewed, updated, and publicized internally



Reference:

International Safety Standards ISO/IEC (Guide 51)
JISZ8501



◇ Response to Industrial Accidents

When a workplace accident occurs, the Panasonic Group follows our “Steps to Take in an Emergency Situation Like an Industrial Accident.” The Operating Site Supervisory Health and Safety Administrator where the workplace accident has occurred makes a prompt and accurate report to the Operating Company Supervisory Health and Safety Administrator.

We have established mechanisms to manage industrial accidents at each global site, report serious incidents within 24 hours, and monitor them for a period of 365 days. We also share case studies and other knowledge gained from workplace accidents with the entire Group. At work sites where an industrial accident has occurred, we investigate the cause and implement measures to prevent recurrence, share the details of the accident throughout the Group, and ensure that other operating sites take preventive measures based on past accidents.

◇ Serious/Severe Accidents in Recent Years and Recurrence Prevention

We are committed to eliminating serious accidents (fatal accidents or accidents resulting in long-lasting physical disabilities) and major accidents (those involving at least three employees). In fiscal 2025, seven serious accidents (including three fatalities and involving contractor's employees) occurred overseas. The Panasonic Group recognizes these accidents as a critical issue that requires immediate attention. We analyze key accident patterns that the Group should address and share the results of our analysis to prevent serious accidents, prioritizing preventive measures for accident patterns that are highly likely to occur at each workplace. The most likely cause of serious accidents is performing non-standard operations on equipment that is in operation, which can lead to entrapment and entanglement in the equipment. It accounts for approximately 70% of past serious accidents. Our analysis suggests that we require safety measures for existing production equipment, particularly those installed before the introduction of the Equipment Safety Standards. To prevent recurrence, we ensure that employees are well-informed about the guidelines for safe work during non-standard operations and are fully compliant with the Group's Equipment Safety Standards. We also operate an Equipment Safety Education System to train individuals who can develop, practice, and establish equipment risk assessments and safety technologies on the production floor. Specifically, our certified instructors use three training programs: (a) training for employees who develop and install equipment, (b) training for employees who use equipment, and (c) in-house Equipment Safety Standard workshops. In China and other Asian regions, efforts are underway to develop local managers to promote equipment safety and ensure compliance with regulations. We will continue to expand these activities globally.

Social Data: Occupational health and safety data (Lost-time injury frequency rate, Severity rate, Serious accidents, Major accidents, and Accidents leading to lost work), page 140

◇ Equipment Safety Education System

	Learning about international standards		Learning about Group standards
Course title	Seminar on Equipment Safety for Engineers	Seminar on Equipment Safety for Managers	Workshop on Equipment Safety Standards
Target participants	Production engineers who primarily design and improve equipment (including those responsible) <ul style="list-style-type: none"> • Production process engineering • Equipment maintenance • Health and safety, etc. 	Those in production engineering or safety who primarily manage the use of equipment <ul style="list-style-type: none"> • Production process engineering • Equipment maintenance • Health and safety • Production line leaders, etc. 	Anyone learning about the Group's policies for drafting, updating, and sharing Equipment Safety Standards <ul style="list-style-type: none"> • Production process engineering • Equipment maintenance • Health and safety • Production line leaders, etc.

Occupational Health

For hazardous work such as handling chemicals, we conduct hazard reviews using Safety Data Sheets (SDS), provide appropriate protective equipment, and attempt to reduce the necessity of such work. We regularly measure environmental impact and conduct health examinations to monitor employee exposure levels to substances specified by law, as well as substances we have independently defined as hazardous. We continually monitor these substances and implement environmental improvements to ensure a sustainable approach.

Additionally, the Japanese government has revised specific provisions of the Occupational Health and Safety Regulations (Self-Directed Chemical Management) to prevent industrial accidents caused by chemical substances. With these revisions, businesses are required to implement appropriate measures to prevent exposure based on the results of risk assessments. In April 2022, the Group established its Chemical Substance Management Standards in response to such changes in relevant laws and regulations. We have also established the Chemical Substance Management Working Group to define shared policies, rules, and training programs, as we implement groupwide initiatives to enhance risk assessment and make the self-directed management of chemical substances routine.

◇ Chemical Substance Management Standards (Japan)

The Group established the Chemical Substance Management Standards to create the compliance provisions required by the Occupational Health and Safety Act and other relevant laws and regulations. We implement these Standards to manage health effectively and appropriately by eliminating and mitigating sources of danger or hazards, thereby preventing work-related illnesses caused by chemical or other substances in the workplace.

◇ Promotional Framework (Japan)

Industrial Health and Safety Promotion Committee (Biannual)	
Objectives	Deciding on policy and measures
Chairperson	Executive officer in charge of HR
Members	Company committee representatives, Union committee representatives, Health Insurance Organization committee representatives
Chemical Substance Management Working Group (four times per year, in principle)	
Objectives	Deciding on the specifics of measures
Members	Company committee representatives, Health Insurance Organization committee representatives (Science Center of Industrial Hygiene)
Health and Safety Committees at each workplace (Monthly)	
Objectives	Executing measures
Members	Company committee representatives, Union committee representatives, Occupational health physician and nurse

Training (Japan)

Panasonic Group educates employees, including external contractors, employees, managers, and occupational health and safety personnel based on the Occupational Health and Safety Education Guidelines and the Mental Health Education Guidelines it has established. The Group Health and Safety Management Division hosts and conducts management-level and Groupwide training. In addition, each operating company and business site utilizes facilities such as the Anzen Dojo (safety training hall) to provide safety education to external contractors and other temporary employees upon their commencement of work. We also provide and promote training for managers, offering specialized training tailored to each manufacturing process, as well as training to develop qualified personnel. Moreover, we strive to raise awareness among contractors by providing them with the required information and educational content. (Examples of specialized training and training for qualified personnel held by the Group (also available to contractors): <https://phio.panasonic.co.jp/kagaku/roudou-eisei-kyouiku/c02.htm> (Japanese only))

Every year, we hold the Employee Personal Health/Occupational Health and Safety Symposium, attended by the Group's safety and health personnel. During this symposium, the Group CEO shares insights on health and safety with all business managers and relevant individuals. The symposium also aims to set a high standard for health and safety activities by sharing best practices for initiatives on occupational health and safety, as well as employee personal health, from all business sites, and allowing attendees to learn from outside experts.

Social Data: Occupational health and safety data (Personal health & safety training), page 140

■ Promoting Health Management

Employee Health

We have sent out a message on health to the entire Group, clarifying our policy of boosting health investments to realize employee well-being. In Japan, all operating companies participate in various Panasonic Health Promotion Activities, a unified effort involving the company, labor unions, and health insurance organizations that meets health maintenance and betterment standards. We also review the results of periodic health checkups, EOSs, and stress checks to confirm that our efforts have been successful and further enhance our initiatives.

Social Data: Occupational health and safety data (Health checkup utilization rates), page 140

◇ Health Maintenance and Promotion Standards (Japan)

In the interest of appropriately and effectively undertaking measures to maintain both employees' physical and mental health, these Standards outline procedures for health checks and follow-up measures, guidelines for interviewing individuals working long hours, methods for assessing psychological burdens, and procedures for preventing those who are ill from returning to work. They also stipulate the creation of Health Maintenance and Betterment Plans, as well as mental health promotion plans. We are coordinating the Group's health maintenance and betterment measures with the Panasonic Health Insurance Association's healthcare business to create synergy between all their initiatives.

◇ Promotional Framework (Japan)

Healthy Panasonic Promotion Committee (held twice a year)	
Objectives	Deciding on policy and strategy
Chairperson	Executive officer in charge of HR
Members	Company committee representatives, Union committee representatives, Health Insurance Organization committee representatives
Healthy Panasonic Working Group (held quarterly)	
Objectives	Deciding on the specifics of strategies
Members	Company committee representatives, Union committee representatives, Health Insurance Organization committee representatives
Health and Safety Committees at each workplace (held monthly)	
Objectives	Executing strategies
Members	Company committee representatives, Union committee representatives, Occupational health physician and nurse

◇ Health Issues and Initiatives (Japan)

As the number of senior employees at Panasonic Group grows, the number of individuals with obesity or other health problems is increasing. With more employees working from home in the wake of the COVID-19 pandemic, issues such as a lack of exercise and poor communication are becoming more prevalent. We need to raise employees' health literacy and get more employees to adopt healthy practices. There is a tendency for individuals with good lifestyle habits in all five areas

(sleep, diet, exercise, moderate alcohol intake, and no smoking) to be less likely to have health risks and have better job performance (based on self-evaluation). One of the goals of the new Panasonic Health Promotion Six-Year Plan starting in fiscal 2025 is to increase the proportion of individuals who have good habits in four or more of these categories to at least 50%. In fiscal 2025, the figure was 36.6%, representing a 5% increase over the previous four years.

Social Data: Occupational health and safety data (Proper lifestyle habits indicators and health indicators), page 140

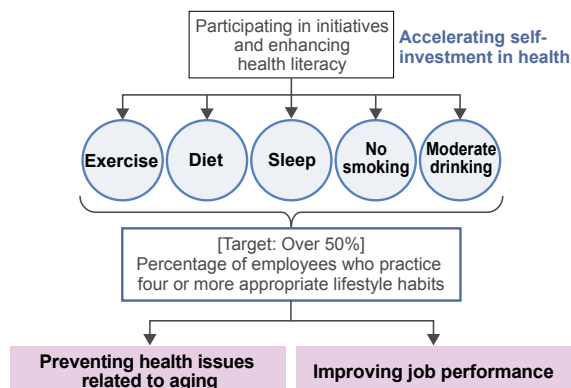
Panasonic offers ICT-based health promotion solutions through web services and lifestyle habit apps. These solutions provide health information, health checkup records, health challenges, effort-based health care point programs (exchange points for products related to health promotion), and tools for measuring health age after periodic health checkups.

◇ Environmental Improvements (Japan)

We are promoting workplace improvements to enable employees to work healthily in all workplaces through health promotion, disease prevention, mental health care, and other employee health initiatives. Our measures to curb smoking include promoting indoor smoking bans (with bans implemented across 89.1% of the Group). Some of the operating companies have initiated a no-smoking policy during working hours.

Additionally, we conduct an annual food conditions survey in 108 Group cafeterias nationwide and promote healthy eating environments in collaboration with approximately 40 contracted food service companies. Currently, 30 cafeterias have obtained external certifications under the Healthy Eating and Dining certification system (six more than last year). Panasonic also prioritizes statutory employee safety by actively offering health guidance and occupational

Panasonic Health Promotion Initiatives and Targets



physician counseling, primarily through its 160 health management offices across Japan. These efforts are targeted at individuals who are subject to specific health guidance and are at high risk of experiencing health problems. For telecommuters, we have developed a “Guide to Working from Home in a Healthy and Safe Manner,” which provides essential points to consider when working from home and offers simple exercises that can be done at home, thereby helping employees proactively maintain their health.

◇ Stress Checks (Japan)

All Panasonic group companies conduct stress checks annually to promote group analyses and workplace improvements at the corporate level, alongside the conventional response for those under high stress. In conjunction with these stress checks, we also recommend that employees practice self-care in terms of sleep, diet, and exercise as a crucial part of maintaining their health. The stress check test results provide employees with an opportunity to notice their own stress levels and offer organizational managers and workplaces feedback in the form of a diagnostic analysis. This analysis is used to develop measures aimed at preventing the occurrence of mental illness by revitalizing the workplace. Employees who work long hours or whose regular health screenings suggest a need for monitoring their safety receive a consultation from an occupational physician, based on the Panasonic Group's own criteria. We also take measures to prevent harm to the employee's health, including addressing working conditions and workplace environments. Furthermore, the Group is addressing excessive working hours to maintain employee health and ensure statutory compliance, and is conducting a fundamental review of work processes to make this possible. These efforts are part of our ongoing commitment to enhancing employee engagement with their work and downtime.

Social Data: Occupational health and safety data (Stress check utilization rates), page 140

■ Initiatives for Preventing Harassment and Ensuring Compliance (Japan)

The Group aims to respect the individuality and abilities of each employee in all workplaces, ensuring that everyone feels motivated and comfortable in their work environment. Therefore, to encourage Panasonic employees to create a company free of harassment that everyone is proud of, we are strengthening our harassment prevention efforts in accordance with the Equal Employment Opportunity Act, the Child Care and Family Care Leave Act, the Power Harassment Prevention Act, and other relevant laws and regulations.

- We designated December as Harassment Prevention Month and have been raising awareness about harassment.
- We are strengthening our disciplinary rules against harassment as part of a groupwide effort to deter harassment.
- We are working to establish Workplace Harassment Prevention Rules at all operating

- companies (April 2025).
- In July 2024, we provided harassment prevention training to managers and employees at all Group companies in Japan (111 organizations, including PHD, PEX, operating companies and others). Approximately 98,000 employees (with a utilization rate of roughly 97%) have attended this training. They learned how to avoid committing harassment and how to proceed if they receive reports of workplace harassment. We plan to offer this course on a continual basis.
 - In addition to the training above, we conducted a harassment recognition survey and shared its results on the intranet.

from employees, including external contractors and freelancers, regarding sexual harassment (including LGBTQ+-related issues), harassment related to pregnancy, childbirth, and childcare leave, power harassment, and all other forms of harassment. Consultations are handled with care, ensuring the privacy of those seeking advice and obtaining their informed consent. Neither they nor any parties cooperating in the verification of the facts will be subject to any adverse treatment.

Contacts for Whistleblowing and Seeking Consultation

■ Mental and Physical Stress Prevention and Response for Employees (Japan)

The Panasonic Group has established the following support lines to help employees prevent or manage mental or physical stress.

◇ Health Management Offices

Panasonic Group staffs these offices with full-time occupational physicians and occupational health staff to provide health support for preventing lifestyle-related diseases and helping individuals stop smoking, as well as consulting on mental and physical health.

◇ EAP*⁷ Counseling Offices

We contracted with external agencies that allow employees to receive consultations without their concerns being disclosed to the company or health insurance association. Clinical psychologists and mental health counselors provide support, including return-to-work programs that help employees transition from leave to return to work.

*7 EAP: Employee Assistance Program

■ Whistleblowing Discrimination and Harassment

The Group has set up a hotline where employees can anonymously report discrimination or harassment if they receive, see, or hear about it.

◇ Global Hotline

For more details, see the Compliance chapter ([page 145](#)).

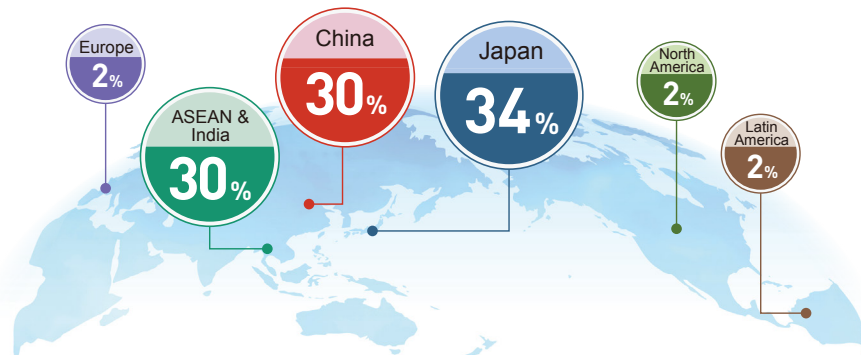
◇ Equal Partnership Counseling Offices (Japan)

We have established equal partnership counseling offices staffed with consultants at both PHD and the union, alongside separate offices at all operating companies to receive consultations

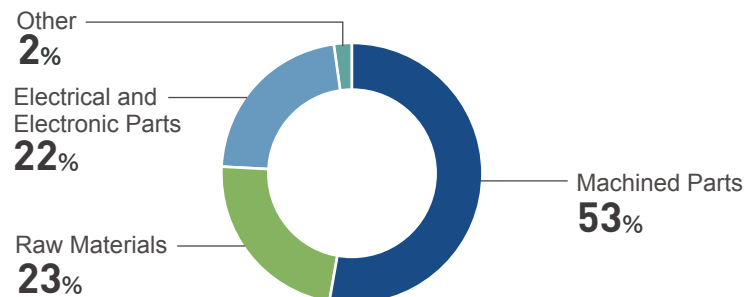
Responsible Supply Chain

Panasonic Group does business with approximately 13,000 suppliers worldwide. Panasonic Group strives to do business with suppliers that not only provide superior technology and quality but also fulfill their social responsibilities including human rights and environmental considerations, healthy workplace environment, and fair transactions. The parts and materials we purchase range from raw materials to electrical/electronic components and processed parts. Our suppliers are located in various regions and countries, meaning that some parts and materials come from regions and countries with many migrant workers. By region, the percentage of suppliers providing parts and materials used directly in manufacturing was 34% from Japan, 30% from China, 30% from ASEAN/India, 2% from Europe, 2% from North America, and 2% from Latin America. By industry, 53% were in machined parts, 23% in raw materials, 22% in electrical and electronic parts, and 2% in others (including molds) (As of March 31, 2025; excludes transactions by Panasonic Automotive Systems Co., Ltd.).

Breakdown of Transactions by Region (%)



Breakdown of Transactions by Product (%)



Policy

■ Procurement Policy

Panasonic Group has summarized its core thinking on procurement in the following 3-item set of Procurement Policy. The fundamental basis of this policy is the concept that, “based on relationships of mutual trust, and through diligent study and cooperation, our suppliers are invaluable partners in creating the value our customers demand”.

● Implementation of Global Procurement Activities

The Company globally establishes partnerships with suppliers to respond to production activities on a global scale, and works to create the functions and values our customers demand based on relationships of mutual trust and through diligent studies and cooperation.

● Implementation of CSR Procurement

Complying with laws and regulations, social norms, and corporate ethics, the Company promotes procurement activities, together with suppliers, that fulfill their social responsibilities, such as human rights, labour, safety and health, global environmental conservation, and information security.

● Procurement Activities Working Closely with Suppliers

In order to achieve product values expected by customers, the Company serves as the contact point of suppliers with respect to information, such as the market trends of materials and goods, new technologies, new materials, and new processes, and works to ensure and maintain the quality of purchased goods, realize competitive prices, and respond to market changes.

In April 2022, we established the “Rules on Supply Chain Compliance” to strengthen our efforts to promote CSR in the supply chain, with our basic policy on supply chain compliance and corporate rules for its implementation. We have also issued the Panasonic Supply Chain CSR Promotion Guidelines (“CSR Guidelines”) for our suppliers to promote collaboration in responsible procurement efforts.

■ Clean Procurement

Because Panasonic Group believes that “a company is a public entity of society”, we engage in fair and equitable transactions with our global suppliers. With a need for a more stringent sense of moderation and ethics and to maintain healthy relationships with suppliers, in 2004, we released our Clean Procurement Declaration and have followed this declaration in our procurement activities

since. In Japan, we promote understanding and awareness of “clean procurement” among our procurement staff by providing annual e-Learning and training materials.

Prohibition of Receiving Money and Valuables from Suppliers and Prohibition of Accepting Any Form of Hospitality, Entertainment or Meals

The Group established “Rules on Gift and Hospitality for AntiBribery / Anti-Corruption” in its internal regulations, applied at the global level. These strict rules apply to the acceptance of gifts, meals, entertainment and travel invitations from our business partners, including suppliers. They stipulate general rules regarding the rationality and balance in light of the purpose, value and frequency of gifts, meals, entertainment and travel invitations, and local customs, and the absence of improper influence on business judgement. More detailed standards and stricter rules are also set for each region.

[Clean Procurement Declaration](https://holdings.panasonic/global/corporate/about/procurement/declaration.html)

<https://holdings.panasonic/global/corporate/about/procurement/declaration.html>

Responsible Executive and Framework

The Panasonic Holdings Corporation (“PHD”) representative director and executive vice president serves as the officer in charge of procurement (as of August 2025). Panasonic Group established a Groupwide framework to foster cooperation in promoting responsible procurement among all Group operating companies and regional procurement divisions. Each of our operating companies, their business divisions, or other relevant Group companies are responsible for applying the PDCA cycle to their practice of responsible procurement, following the Group’s internal rules, standards, and manuals. The Global Procurement Division of Panasonic Operational Excellence Co., Ltd. (“PEX”) fills the role of providing Groupwide measures and support to all operating companies. The heads of procurement at the operating companies and business divisions discuss any related issues at regular Groupwide meetings and take appropriate solutions.

Supply Chain Due Diligence

■ Enforcement of the Panasonic Supply Chain CSR Promotion Guidelines

We, the Panasonic Group, adhere to international norms and principles, such as the United Nations “Guiding Principles on Business and Human Rights”, and require suppliers to affirm them. To show our approach to CSR procurement and clearly convey the requirements to suppliers, we have established the CSR Guidelines, and we share them at the start

of transactions. The contract obligates suppliers to comply with the guidelines. The CSR Guidelines stipulate the following provisions, while taking into account laws, regulations, and principles of international norms:

1. Labor rights: Prohibition of forced labor or child labor, appropriate working hours, decent wages, humane treatment, elimination of discrimination, freedom of association
2. Occupational health and safety: Training to ensure workplace safety and emergency preparedness, safety measures for machinery and equipment, and occupational health and safety rules for facilities
3. Environment: Compliance with the “Panasonic Group’s Green Procurement Standards”
4. Ethics: Prohibition of corruption and bribery, and promotion of fair business and responsible minerals procurement
5. Information security: Prevention of information leaks and protection against computer and network threats
6. Product quality and safety: Creation of a product quality management system, provision of accurate product and service data, and maintenance of product safety
7. Contributions to society: Contributions to society and local communities
8. Management systems

The CSR Guidelines are prepared in Japanese, English, and Chinese and we both keep them on our website and endeavor to distribute to our suppliers and notify them of any revisions. We also ensure that we share these guidelines with our suppliers at workshops as necessary. We ask our suppliers to communicate the requirements of the guidelines to their suppliers and subsequent suppliers, and to check their compliance status. For further details, please visit the following website.

[For Suppliers](https://holdings.panasonic/global/corporate/about/procurement/for-suppliers.html)

<https://holdings.panasonic/global/corporate/about/procurement/for-suppliers.html>

■ Obtaining Commitment from the Suppliers

We, the Panasonic Group, require that suppliers affirm the Panasonic Group’s Code of Ethics & Compliance and the Panasonic Group’s Human Rights and Labor Policy, and at the start of transactions for materials and components for the manufacturing of Panasonic products, we make it mandatory to conclude a Master Global Purchasing Agreement that stipulates compliance with the CSR Guidelines. In addition, we stipulate in the CSR Guidelines a respect for human rights as expressed in United Nations norms and principles, an evaluation of the status of suppliers’ human rights initiatives and the implementation of prevention / mitigation / corrective measures, a request for compliance with tier 2 suppliers, and a request for cooperation with the Panasonic Group’s human rights due diligence. Since establishing the CSR Guidelines in 2016, we have distributed them to suppliers for awareness and dissemination and have initiated the CSR Self-Assessments described below. In the revised template of the

Group's Master Global Purchasing Agreement, effective as of April 2022, we have mandated that our suppliers comply with these CSR Guidelines. We also aim to ensure that all suppliers make commitments without exception, so we began asking existing suppliers to submit compliance agreements after revising the CSR Guidelines in December 2022. As of now, over 90% of our suppliers have submitted their agreements.

■ Conducting CSR Self-Assessments and Audit

To promote human rights due diligence and other aspects of CSR throughout the supply chain, the Group requires its suppliers to conduct CSR Self-Assessments.

The CSR Self-Assessments are structured based on the CSR Guidelines, and we require that all new suppliers conduct the assessments before we start transactions with them. We also require our existing suppliers to conduct them regularly.

We conduct CSR Self-Assessments using a web-based questionnaire, which reduces the burden on suppliers and the Group, and improves collection efficiency and response accuracy. As of March 31, 2025, we have collected responses from more than 12,300 suppliers, representing 98% of the intended respondents. After identifying issues, particularly those identified as priority management items in the CSR Self-Assessments, such as labor conditions for migrant workers, we will visit suppliers, check on-site conditions, hold interviews, and investigate issues and work to correct them. We will continue to collect these assessments from our suppliers on a regular basis.

Since April 2022, the Group has begun work on initiatives to build a structure for human rights due diligence. While incorporating guidance from outside experts, the Group has compiled a table to assess human rights risks at our suppliers by using risk indicators and indices provided by international organizations in order to identify suppliers for which action should be taken on a priority basis.

Each operating company narrowed down the audit targets from among these identified suppliers based on the aforementioned risk approach and conducted supplier audits using the supplier audit plans they formulated. Since fiscal 2024, they have conducted audits for a total of 271 suppliers (22 of which were audited by third-party organizations). In fiscal 2026, we aim to complete audits of suppliers that require the highest priority.

The items identified through audits are shown in the table below. We have asked suppliers to improve these items, and we are monitoring their progress.

Area	Items requiring improvement
Management systems	<ul style="list-style-type: none"> • No human rights-related items in the CSR policy • No training records (attendance records) were kept during employee training
Labor	<ul style="list-style-type: none"> • No disciplinary action workflow, with unclear procedures when disciplinary action is required
Health and safety	<ul style="list-style-type: none"> • Workplace patrols are conducted only once a month, despite being stipulated in the safety and health regulations that they should be conducted once a week
Environment	<ul style="list-style-type: none"> • No reference to the latest Safety Data Sheets (SDS) when handling chemicals
Ethics	<ul style="list-style-type: none"> • No employee training to protect the intellectual property rights of customers and suppliers
Information security	<ul style="list-style-type: none"> • Insufficient management of employee personal information

■ Industry Collaboration Initiatives

The Group is a member of the Responsible Business Alliance (RBA) and promotes responsible business conduct. We also participate in the Sustainable Procurement Partnership Initiative Task Force under the Responsible Supply Chain Working Group of the Japan Electronics and Information Technology Industries Association (JEITA) CSR Committee, promoting human rights due diligence throughout the industry's supply chain, including our suppliers. We also pursue industry collaboration to enhance awareness of and improve investigation efficiency in minerals procurement through our participation in JEITA's Responsible Minerals Trade Working Group. Specifically, we are collaborating with domestic and international industry associations to promote proper initiatives for responsible mineral procurement through seminars, investigative briefings, and thorough reviews of smelting and refining plant information. Moreover, the Group has been involved in the Responsible Minerals Initiative (RMI) since 2017 to learn about the latest industry trends and promote best practices in procurement.

Initiatives for a Harmonious Relationship with the Environment

We strive to reduce the negative impact on the environment through cooperation with our suppliers and logistics partners. For details, please refer to the "Collaboration Across the Supply Chain" section in the "Environment" chapter ([page 34-](#)).

Responsible Minerals Procurement

■ Our Basic Stance

Panasonic Group recognizes that the procurement of certain minerals (notably tin, tantalum, tungsten, gold, cobalt, and mica) carries a risk of funding organizations in conflict-affected areas and risks related to human rights abuses, child labour at mining sites, harsh working conditions, environmental destruction, and corruption in high-risk areas. This is a matter of grave social concern, and to fulfill our corporate social responsibility, Panasonic Group is engaged in the responsible procurement of minerals in its global supply chain.

Of course, there are companies and individuals in those same areas who conduct their business legally at the same time. Therefore, while we remain mindful of our obligation to avoid using minerals associated with illegal or unethical practices, we strive to ensure that this does not hinder the business activities and livelihoods of legitimate companies and individuals. To this end, it is necessary for us to work in partnership with a wide range of stakeholders including national governments, companies, and NPOs that are working toward creating sound minerals supply chains in the target areas.

We will keep conducting its activities based on the “Due Diligence Guidance” of the OECD (Organization for Economic Co-operation and Development) and build management processes in line with global standards.

The promotion of responsible minerals procurement requires conducting due diligence throughout the entire supply chain, from upstream mining companies to smelters, refineries, and downstream enterprises. We require that all related suppliers provide information on smelters/refineries throughout the supply chain, and we aim to procure from suppliers who don't present any issues. We also participate in the RMI to promote industrywide efforts.

■ Responsible Minerals Survey Initiatives

Responsible minerals survey requires cooperation from all our suppliers going back to the refineries and smelters. Panasonic Group uses industry-standard survey forms issued by RMI to conduct surveys, including the tin-tantalum-tungsten-gold (3TG) survey form (CMRT) and the cobalt-mica survey form (EMRT).

The Panasonic Group conducts surveys regarding responsible minerals on the suppliers of each operating company and business site. In fiscal 2025, we collected responses from 1,470 of 1,508 suppliers that we asked to conduct CMRT surveys and 1,534 of 1,581 suppliers that we asked to conduct EMRT surveys (as of March 31, 2025; excludes surveys conducted by Panasonic Automotive Systems Co., Ltd.). Based on the data collected from the survey forms, we conducted a risk analysis and assessment and requested further investigations from suppliers, according to the risks that we identified.

In fiscal 2025, roughly 60% of the designated refiners and smelters had Conformant/Active Smelter status (refiners and smelters that have either passed RMI audit or is currently undergoing one). We are also working on industry efforts that will push the remaining 40% of those refiners and smelters toward participation in the Responsible Minerals Assurance Process (RMAP). In the rare event that we find minerals that are complicit in conflicts or human rights violations in our supply chain, we also ask suppliers to take steps toward no longer using them, including changing their source.

■ Initiatives to Comply with the European Battery Regulation Due Diligence Requirements

Recent years have brought growing societal expectations that companies will responsibly source the raw materials used in batteries. In August 2023, the EU Battery Regulation (Regulation 2023/1542) came into effect. In response, the Group is conducting due diligence on environmental and social risks in the battery supply chain, as required by the EU Battery Regulation.

In fiscal 2025, we sought advice from external experts to deepen our understanding of these requirements. Furthermore, we received support from external organizations to conduct investigations with due consideration to the target companies' business confidentiality and competitive concerns. We identified the chain of custody for the four target materials, assessed the risk levels of the entire battery supply chain, and collaborated with business partners (including parts and materials suppliers, manufacturing contractors, trading companies, and logistics companies within the battery supply chain) to evaluate their environmental and social risks and risk management systems. We plan to promote initiatives based on future guidelines for battery due diligence.

Internal Training and External Awareness-Raising

In order to develop human resources who can fulfill their social responsibilities in procurement operations, the Procurement Division provides training on CSR and procurement compliance to our procurement staff. We have established a buyer certification program to certify buyers who have acquired the necessary knowledge and skills, including CSR procurement, with over 1,500 participants having completed the Level 2 CSR procurement training required for certification. We have also conducted training for procurement employees overseas (in parts of Europe, the US, China, and other Asian countries). Through this training, we aim to consolidate their knowledge while confirming their understanding of essential topics and the importance of compliance in CSR procurement—including compliance with environmental, anti-corruption, and anti-bribery regulations, as well as human rights, labour, health and safety, and clean procurement in the supply chain. In addition to all this, we also build in basics on CSR procurement in our training curricula for new employees in procurement departments and those

transferring from other divisions.

In fiscal 2024, we also conducted training programs to develop supplier auditors, holding two sessions in Japan, seven in Asia, and two in China, totaling 11 sessions. We continued these efforts in fiscal 2025 across 13 countries, training a total of 270 global auditors.

Our web portal for procurement employees contains the information necessary for responsible procurement—including the procedures employees should follow for CSR procurement, the CSR Self-Assessments we ask suppliers to conduct, and guidelines for conducting audits—so that employees always have the latest information when performing their duties.

In fiscal 2023, we looked to raise awareness in the supply chain by holding workshops and meetings with about 100 suppliers, mainly in Malaysia. We also conducted CSR audits at around 50 suppliers in Asia. In fiscal 2024, we held human rights due diligence training in Malaysia six times in cooperation with the United Nations Development Programme (UNDP), and 207 of the approximately 500 suppliers in Malaysia with significant transaction amounts (228 attendants) attended the training. In fiscal 2025, we explained the importance of ESG initiatives and conducted training for suppliers in Malaysia, India, Thailand, and Vietnam, targeting 280 to 630 companies per country. In fiscal 2026, we plan to expand our supplier training to Singapore, Indonesia, the Philippines, and other countries.

Systems for Whistleblowing and Seeking Consultation

The Panasonic Group has established its “Global Hotline EARS” that anyone, including Panasonic Group employees and suppliers, can use to anonymously report any violation or suspected violation of laws and regulations, agreements with our suppliers, the Panasonic Group Code of Ethics & Compliance, or other material codes in the Group’s supply chain. Whenever there is a report, the Group follows all internal rules and guidelines as well as the laws of the relevant countries with regard to the protection of the individual making the report, and from there it undertakes appropriate investigations and countermeasures. For more details, please see “Whistleblowing System” in the “Compliance” chapter ([page 146-](#)).

In addition to our Global Hotline, we offer access to JaCER, an industrywide grievance platform established by the CSR Committee of the Japan Electronics and Information Technology Industries Association (JEITA). JaCER is a contact point for suppliers and their employees to report any adverse human rights impacts in the Group’s supply chain. By accepting grievances through a third-party contact, we aim to make grievance handling fairer and more transparent, promote dialogue and redress more than ever before, and work to resolve essential human rights issues. In all reporting systems, we ensure whistleblower anonymity and report confidentiality and publicize the contact information for reporting systems on our supplier web portal and our website, “For Suppliers.”

We conducted audits through a third-party organization on human rights issues at suppliers that we received through the hotline, and we have witnessed suppliers take corrective actions.

☞ For Suppliers

<https://holdings.panasonic/global/corporate/about/procurement/for-suppliers.html>

☞ Global Hotline

<https://secure.ethicspoint.eu/domain/media/en/gui/104773/index.html>

☞ Grievance mechanism of Japan Center for Engagement and Remedy on Business and Human Rights (JaCER)

<https://jacer-bhr.org/en/index.html>

Raising Product Quality Levels and Ensuring Product Safety

Based on the idea promoted by our founder that Panasonic should strive “to contribute to society through its products and services while always placing the customer first,” the Panasonic Group approaches “quality” as something that means more than the quality of the work we do or the products we make. To us, it also means conducting business in a fair and honest manner at all times, so that we can continue to offer products and services that are better than anyone else’s while upholding our commitment to our customers and society, taking action to ensure the safety and quality of our products and services.

Policy

Panasonic states in its Groupwide Quality Policy that the company will “truly serve customers by way of providing products and services that continuously meet and satisfy the needs of customers and society.” Each operating company has established and operates their own quality management system with responsibility for the quality of their products. In particular, our approach to quality defects focuses on compliance with laws, regulations, and corporate ethics, as stated in the Panasonic Group Code of Ethics & Compliance. This code specifies our adherence to laws, regulations, and social norms, including industry standards and promises to customers. It also states in Chapter 4: Our Business Relationships that we should honor our commitments to our customers and to society as they relate to our products and services, and that we must act in the interest of ensuring the safety and quality of our products and services. In addition, the Group has established a Basic Policy regarding the Voluntary Action Plan for Product Safety. As per this policy, Panasonic actively strives to ensure the safety of its products, while keeping to its principles of “the customer comes first” and of maintaining a “Fairness and Honesty” attitude.

☞ Panasonic Group Code of Ethics & Compliance

<https://holdings.panasonic/global/corporate/about/code-of-conduct>

☞ Basic Policy Regarding the Autonomous Code of Conduct for Product Safety (Japanese only)

<https://holdings.panasonic/jp/corporate/about/code-of-conduct/quality-policy.html>

Per our Basic Management Policy, Panasonic Group considers always ensuring the safety of the products we manufacture and sell and delivering safety and security to our customers as essential management issues and social responsibility objectives. Based on the profound lessons learned from the accidents involving FF-type kerosene heaters, specifically, we apply our unique product safety standards to each product lifecycle phase (from planning and design to service and disposal) for every product to ensure its safety at all times. We also use our

Group intranet to share information related to the product safety of all Panasonic products in a timely manner to all employees, including persons in charge of quality and design at each operating company and business site. We also strive to fulfill our imperative of having zero product safety incidents.

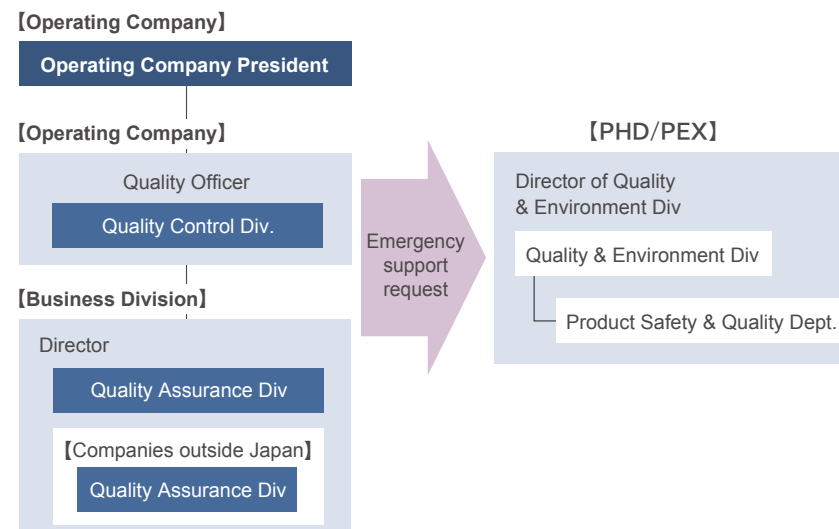
☞ Important news about products (for Japan)

<https://holdings.panasonic/jp/corporate/about/products-information.html>

Responsible Executive and Framework

As of August 2025, the executive in charge of quality is the Group Chief Technology Officer (Group CTO). Each operating company has appointed a quality manager and established systems for undertaking its business with independent responsibility and self-sufficiency. In addition, Panasonic Holdings Corporation (“PHD”) and Panasonic Operational Excellence Co., Ltd. (“PEX”) provide support in response to the requests from the operating companies as countermeasures against critical risks for the Group, while expanding quality-related assets horizontally over the Group.

Quality Management Structure (as of August 2025)



■ Quality Policy Review Structure (Meetings and Committees)

Panasonic Group investigates and summarizes Groupwide quality improvement efforts and the state of product quality within the Group at its Chief Quality Officer (CQO) Meetings. Group CQO, CQOs from each operating company, and persons involved in relevant job functions such as quality and product regulations attend these meetings. Attendees discuss how we should handle quality over the medium and long terms, and they decide on initiatives meant to further strengthen the foundation of quality for the whole Group. Panasonic Group also holds the Quality Committees—attended by the quality managers of each operating company—as a place for more practical discussions on quality policies and measures.

Quality Management System

To establish self-sufficient quality assurance processes in each operating company and business site, Panasonic Group published its Product Quality Management System (P-QMS) Guidelines in 2004. These Guidelines supplement the requirements of the ISO 9001 standard with the Group's own quality assurance methods and expertise to create a quality management system and have been updated to comply with ISO 9001-2015. Operating companies and business sites work to implement quality management systems uniquely tailored to their business characteristics with reference to these Guidelines. At various levels, they conduct regular quality assessments and quality audits to review the progress of quality management while also formulating corrective action plans for any discovered deficiencies, all in an effort to continuously improve quality.

To properly address our continually diversifying business areas, each operating company operates according to the P-QMS Guidelines and industry standards appropriate to its field, from household appliances, in-vehicle accessories, residential, devices, B to B solutions, pharmaceuticals, services, and more.

In addition to quality audits at operating companies/ business sites, the PEX Audit Department and the Quality Department jointly conduct quality function audits against operating companies (including against specific products) for the purpose of strengthening periodic second-party audit perspectives on products. We evaluate various processes in the development and manufacture of products, and work to understand the effectiveness of our operating companies/ business sites' quality management systems. Additionally, we obtained and maintain quality certifications (ISO 9001/ IATF16949) at our operating companies and production sites. Regularly incorporating audits by third-party organizations enhances checks on each process—including development, manufacturing, and inspections—and improves our reliability to our customers.

Meanwhile, due to instances of irregularities for electronic materials products manufactured and sold by Panasonic Industry Co., Ltd., the international standards for quality management systems “ISO 9001” and “IATF 16949” of the affected business sites have been revoked in

March 2024 and May 2024 respectively. We will continue to work on improvements with the aim of obtaining recertification for both standards. Please refer to the “Compliance” chapter (page 145-) for information on how the irregularities have been handled.

🔗 **An example site with ISO certifications by business unit**
Public website for official certifications of production sites of Panasonic Industry Corporation products.

<https://industrial.panasonic.com/ww/downloads/certifications>

Global Safety Standard Certifications Obtained

ISO 13849 (ISO 13849-1) Certification

An international standard issued by the International Organization for Standardization (ISO) that applies to parts of machinery control systems responsible for providing safety functions. Panasonic Advanced Technology Development Co., Ltd. received recognition in March 2024 that its wireless emergency stop device (receiver) is compliant with the international standard ISO 13849-1 Safety of machinery - Safety-related parts of control systems.

🔗 **Wireless emergency stop device (@seguro wes) (Japanese only)**

<https://adtsd.jpn.panasonic.com/solution/wes.html>

NSF/ANSI/CAN 372 Certification

NSF/ANSI/CAN 372 is an international standard for the safety of drinking water used in the United States, Canada, and internationally. This standard establishes criteria for lead content in drinking water supply fixtures. The drinking water system components in Panasonic HVAC Company's heat pump water heater were recognized as compliant with this standard in fiscal 2025.

EN 18031 (EN 18031-1 and EN 18031-2) Certification

EN 18031-1 and EN 18031-2 are standards that meet the cybersecurity requirements of the European Radio Equipment (RE) Directive. The former establishes common security requirements for wireless devices connected to the Internet, while the latter addresses data protection and privacy requirements. The network adaptor in Panasonic HVAC Company's heat pump water heater was recognized as compliant with these standards in fiscal 2025.

Internal Company Rules Concerning Product Labeling

Based on the Manufacturing Industrial Standards for Panasonic Group, each operating company determines its own approach and guidelines to be followed with regard to the way their products are handled as well as installation and services as appropriate for each product. Specifically, warning label related to the safe use of products and information label on legally

designated recycling or disposal methods (according to the laws including Recycling Acts) and other information that helps customer safely use our products and services are specified in the design methods of warning labels and instructions for use, care and installation of products in consideration of preventing customers from misusing. There have been no instances of product labeling violations subject to fines or penalties in the Group (as of August 2025).

Product Security

As consumers conveniently use various products equipped with software and connected with networks, we must ensure product security to prevent harm from attacks initiated by malicious third parties who aim to leak or alter data or cause device malfunction. Panasonic establishes internal structure and rules, including a specialized department for Groupwide product security and guidelines for promoting security-conscious development. We ensure the security of our products by regularly reviewing the structure and rules in conjunction with our information security and production system security initiatives, so our customers have peace of mind when using our products.

■ Ongoing Information Collection

Product security issues and how to address them change on a daily basis. At Panasonic Group, we collect the most up to date information on product security by joining various security focused organizations, e.g., FIRST*, a forum to share information on security incidents, and attending various global conferences. This information is shared with any relevant divisions and used internally through initiatives to improve product security measures throughout the Group.

* FIRST: Forum of Incident Response and Security Teams

■ Promoting Product Security from Development

During the development phase of a product, we consider what assets and functions need to be protected, as well as any potential attacks against them. Products are developed while minimizing these risks. In addition, security experts perform tests incorporating up-to-date attack methods on the product prior to shipment, to ensure that Panasonic products do not contain any "security vulnerabilities" from both a hardware and software standpoint.

■ Post-shipment Response

As part of the Group's post-shipment monitoring of our products, we have a contact point to receive reports on vulnerabilities discovered in Panasonic products after shipment. When we receive information on vulnerabilities, we immediately verify whether they will impact Panasonic products. If we find that our products have security issues because of those vulnerabilities, we ensure product security through updates or similar means and take additional actions including establishing a check system to prevent the issue from recurring. We have systems in place that

allow the Product Security Center to monitor progress and provide support until the response of the relevant business divisions are complete.

We also have systems in place that make it possible for Panasonic to take a more active role in obtaining information on vulnerabilities and acting on it (rather than waiting for vulnerabilities to be reported) by continually monitoring the latest threats that might affect our products post sale.

🔗 **Panasonic Product Security Incident Response Team**

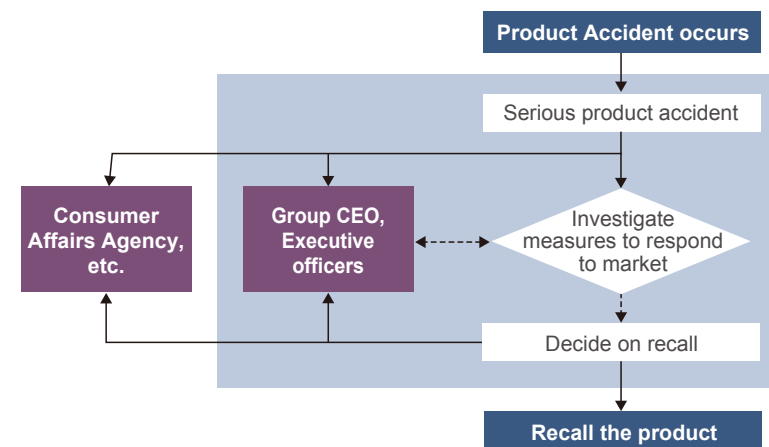
<https://holdings.panasonic/global/corporate/product-security/psirt.html>

Major Accidents and Responses

■ Responding to Product-Related Incidents

In the event that a product-related accident occurs, Panasonic immediately confirms the facts related to the incident, and analyzes and verifies its causes. If the incident is deemed to be serious, operating companies and business sites as well as PHD/PEX work together to take appropriate measures to ensure customers' safety. Specifically, Panasonic Group's first response is to notify relevant government bodies such as the Consumer Affairs Agency, as well as the operating company President, Group CEO and senior management, who then consider the response policies. In addition, based on incidents that have occurred in the past, operating companies prepare manuals detailing responses to product failures, safety test documentation, etc. We are putting these into practice in new product development, specification changes, etc. to prevent incidents' recurrence.

Product Accident Response Flowchart



■ Serious Product-Related Accident Information

In Japan, Panasonic Group publicly reports serious product accidents^{*1}, including accidents suspected of being caused by products^{*2}, and accidents for which it has been determined that it is unclear whether a product was the cause^{*3}, based on the Consumer Product Safety Act and the Group's basic policies per its Autonomous Code of Conduct for Product Safety.

*1 "Serious product accidents" refers to the following accidents specified in the Consumer Product Safety Act:

- Accidents resulting in death;
- Accidents resulting in serious injury or illness (injury or illness requiring at least 30 days of treatment), or accidents resulting in physical impediment;
- Carbon monoxide poisoning;
- Fires (confirmed as such by firefighting authorities).

*2 Any of the following:

- Accidents relating to gas devices or kerosene devices (including accidents in which it has yet to be determined whether the product was the cause);
- Accidents relating to products other than gas or kerosene devices for which it is suspected that the product was the cause.

*3 Among serious product accidents, accidents for which Product Safety Group of the Consumer Economic Affairs Council of the Ministry of Economy, Trade and Industry, Japan, has determined that it remains unclear whether a product was the cause.

🔗 List of Information Concerning Serious Product-Related Accidents (Japanese only)

<https://holdings.panasonic.jp/corporate/about/products-information/psc.html>

Outside of Japan, Panasonic also identifies and discloses information on product-related accidents based on the laws and guidelines of each country.

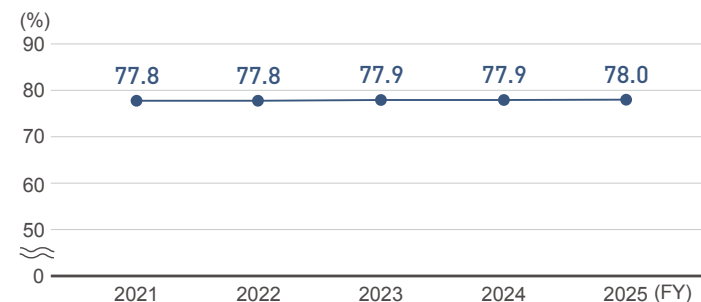
■ Progress in Response to Incidents Related to FF-Type Kerosene Heaters

It has been 20 years since Panasonic undertook emergency groupwide market measures as a result of product safety incidents involving FF-type kerosene heaters in 2005. We continue to work, led by the Corporate FF Customer Support & Management Division, to prevent any new incidents.

In fiscal 2025, as part of our efforts to identify target products, we conducted a door-to-door survey of exhaust and intake ducts in the vicinity of former retailers that have ceased operations, focusing on Hokkaido, Tohoku, and Nagano Prefectures. The same year, we began utilizing IT-based investigation tools to drive the search toward new discoveries. Furthermore, we continue to diligently promote product recalls from customers who have already had their units inspected and repaired, while also maintaining ongoing notification campaigns to ensure that all customers are informed of the recall. In fiscal 2025, we added 56 units to our list of products discovered or confirmed to have been discarded. In total, 118,642 units have been recorded, representing 78% of the units sold as of March 31, 2025. We were finding products that our customers had

continued using without realizing the potential harm of the heaters, meaning that a high degree of risk still remains. We will continue our search efforts.

Ratio of Identified Units* to Total Units Sold (%)



* Identified units: This figure includes the number of units recalled, the number of units in use after examination and repair, and the number of units we have confirmed that customers have discarded.

Training

The Panasonic Group conducts training every year for all quality managers at each operating company and business site, with the aim of training key quality personnel to promote quality management innovation. In particular, the Group regularly holds a Business Division Director Quality and Environment Workshop for business managers responsible for the quality management systems in their respective divisions, as well other activities geared toward learning about results-driven, quality-based management, including guest lectures and training through case studies. In addition to training for specific employee ranks, we are promoting awareness of group-wide quality improvement through ongoing quality training for quality function employees during the first three years after joining the company, as well as customized training specific to products and businesses.

In addition, e-Learning programs such as "Fundamentals of Product Safety" are being put in place to spread a corporate culture that places the highest priority on product safety to all employees. In addition, each operating company conducts its own Quality Control (QC) Activities through which individuals can come together to learn problem solving methods to be used in the field as part of our efforts toward bolstering quality on the production floor. Product Safety Forum, an event that provides a venue for thinking about product safety using examples from the Group and elsewhere, took place twice in fiscal 2025, for a total of 85 times.

The Group has also established a Product Safety Learning Square at the Team & Talent

Development Center in Hirakata, Osaka, with the aim of conveying lessons based on actual business sites and actual products, and of providing instruction to enhance product safety-related skills. The Product Safety Learning Square offers an opportunity to see actual products that were recalled in the past—such as those recalled after the FF-type kerosene heater accidents—as well as other information on the causes of their problems, the steps taken during the recall, and the measures taken to prevent the critical unsafe phenomena (including tracking or strength degradation). The Virtual Product Safety Learning Square also provides an online exhibition that can be viewed freely online. The Product Safety Lab recreates an actual space that was filmed in 360 degrees to allow viewers to move around that space freely, and even read information panels or watch views by simply clicking on an icon. We also conduct educational activities for employees in distant locations and outside Japan by expanding our reach.



Product Safety Learning Square

We also pass down the lessons learned from customer safety incidents, especially those involving FF-type kerosene heater accidents, through lectures given in various training programs and educational materials posted at the aforementioned Hirakata Product Safety Learning Square, the Kusatsu Product Safety Museum, the Nara Learning Center, and the Mobile Learning Center. We strive to foster a Panasonic Group culture that prioritizes product safety. As we mark the 20th year since the accidents, we have updated the exhibitions in Hirakata and Nara to raise awareness of what happened and to demonstrate our top management's commitment to quality, as well as promote behavioral changes aligned with our “customer-first” philosophy. Key updates include revisions to the content and layout of the FF-type kerosene heater accident exhibition, as well as the addition of a new Quality Compliance Zone.

List of Awards

Product Safety Awards

The awards program was launched by the Ministry of Economy, Trade and Industry in 2007 with the aim of encouraging private enterprises to be more active about improving product safety, as well as to firmly establish the value of product safety in society as a whole.

- FY2023 METI Minister's Award, Large Manufacturer and Importer Category: Laundry and Cleaner Division, Living Appliance and Solutions Company, Panasonic Corporation

🔗 https://www.meti.go.jp/product_safety/ps-award/3-consumer/r4_award.html#anc-2-1 (Japanese only)

IAUD International Design Award

The awards program was created by the International Association for Universal Design and is meant to recognize groups and individuals who have conducted or proposed particularly noteworthy activities aimed at realizing a UD society in which everyone can live comfortably. Various products and initiatives of former Panasonic Corporation had received the IAUD Gold Award for seven consecutive years until 2018, in addition to other recent recognition below:

- FY2021
Panasonic LED Torch Light, Silver Award,
Innovation for Everyday Use and Emergency Situations First Shaving Series, Bronze Award,
Product Design
- FY2022
Panasonic IC card reader with facial recognition, Gold Award,
Healthcare and Welfare Design Emergency broadcasting equipment, Silver Award, Security
and Public Safety
- FY2025
Panasonic's Inclusive Design, Grand Award (Business Strategy category) at IAUD International
Design Award 2024

🔗 **Panasonic Group Universal Design**

<https://holdings.panasonic/global/corporate/universal-design.html>

🔗 **Panasonic Group Inclusive Design (Japanese only)**

<https://holdings.panasonic/jp/corporate/inclusivedesign.html>

AI Ethics

Materiality

It has often been pointed out that while new technologies can offer solutions for different kinds of issues and enrich people's lives, the risks those same technologies bring have the potential to lead to human rights issues like violations of privacy, more intense illicit surveillance, and discrimination by algorithms that have been trained on biased data. The Panasonic Group considers our approach to AI ethics as "a promise to the rest of the world to apply AI in ways that are human-centered and that respect human rights," and we work to apply that approach to AI ethics to the ways in which we develop and operate our AI products and services, as well as our AI utilization.

Policy

The Panasonic Group's policy with regard to AI is to work to protect the safety and interests of all stakeholders, including any customers involved, and minimize the impact of risks throughout the AI utilization life cycle from the planning of AI products and services up to their sale and use. By fostering trust in our AI technologies and products in this way, we will encourage further AI utilization, through which we can make a greater contribution to society.

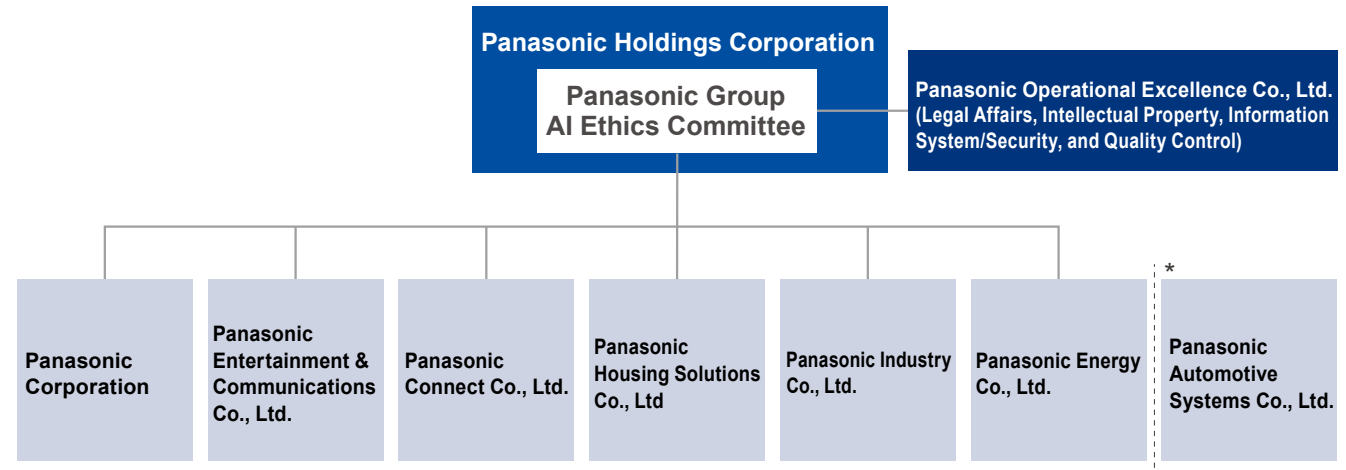
In order to do this, we have defined our AI Ethics Rules (which apply to the entire Group), and we conduct AI ethics activities to mitigate and avoid risks that can come with improvements to those technologies and processes by evaluating and managing risks related to AI ethics so that our AI utilization life cycle will function appropriately with reference to our AI Ethics Rules as well as relevant laws, regulations, and ethical guidelines for each country. In 2022, we established and published our AI Ethics Principles.

🔗 **Panasonic Group Responsible AI**

<https://tech-ai.panasonic.com/en/responsible-ai/>

Promoting Organization

AI ethics activities for the Panasonic Group are driven by the Group CTO (Executive Officer), our head of AI operations (as of August 2025).



* Panasonic Holdings Corporation ("PHD") has formed a strategic joint partnership with the Apollo Group in the business of Panasonic Automotive Systems Co., Ltd. ("PAS"). As a result, PAS is no longer a consolidated subsidiary of PHD, and Star Japan Holdings (including PAS as a sub-subsiary) has become an equity-method affiliate of PHD. For more information, please refer to the following news release.
PHD and PAS will continue to collaborate in promoting AI ethics activities.

🔗 <https://news.panasonic.com/global/press/en241202-6>

The AI Ethics Committee has been established within the Panasonic Holdings Corporation by the Group CTO, comprising staff members in charge of AI ethics and members from other related departments like legal and information security. The Committee provides the Group with systems and measures to be implemented in relation to AI ethics activities and provides operating companies with support for their AI ethics activities as well as understanding, reviewing, and formulating countermeasures against risks. Each operating company also has persons in charge of AI ethics, and these individuals cooperate with the AI Ethics

Committee to carry out activities that fit the business and technologies of each company.

For extremely high-risk AI projects or those with manifest risks, the AI Ethics Committee will propose countermeasures, report them to the AI Ethics Committee Chair and the operating companies, and then collaborate with the operating companies on their implementation.

Education

The AI Ethics Committee provides educational materials on the basics and promotion of AI ethics to enable all our employees to work in line with the Group's AI ethics principles.

Since 2022, the AI Ethics Committee has been providing e-Learning courses on AI ethics for all employees in our domestic group companies every year. We also post e-Learning materials to our Intranet site so that all employees, including those in overseas companies and temporary staff, can strengthen their understanding whenever necessary.

Risk Assessment

In 2022, Panasonic introduced a monitoring system to identify the ethical risks of AI in Group products. The AI Ethics Committee collects risk assessment results of operating companies through the Group employee survey results and the groupwide risk check system and analyzes them to understand any risks within the Group. For matters that have been determined to pose a high level of risk, the Committee sets up review teams to conduct risk reviews or otherwise addresses them across organizational divisions.

External Cooperation

The AI Ethics Committee also conducts research and outreach related to AI ethics in various ways, including participation in committees at external institutions that research AI ethics, as well as within the community, academic, and public sectors. Panasonic participated in drafting the Governance Guidelines for the Implementation of AI Principles through the expert group laid out by Japan's Ministry of Economy, Trade and Industry. We are further strengthening our links with external parties through our membership in the AI Alliance, a global alliance on AI.

Customer Relations

Improving Customer Satisfaction

Since its founding, Panasonic has sought to contribute to society through its products and services, always prioritizing the customer's needs above all else. The Group aims to enhance customer service (CS) and offers products, solutions, and services that enrich the lives of people worldwide. When providing CS, the Group strives for sincerity, accuracy, and speed, and it acts with humility and appreciation. This finds its basis in the CS principle of "true service" that the Group's founder described. Our fundamental stance is thus to provide customers with trust, peace of mind, and satisfaction.

Service Philosophy (True Service) The customer's satisfaction is our satisfaction.

True service resides in mutual satisfaction.

Service is an integral part of any business. A business that does not provide service is no business at all. Service, therefore, is the duty and obligation of any business person. But there's nothing more aggravating than service provided only out of a sense of duty. Customers can sense it.

Service means satisfying customers, and when we satisfy our customers, we in turn find satisfaction in a job well done. Satisfied customers and satisfied employees: This is what constitutes true service.

Konosuke Matsushita
August 1967 issue of PHP Magazine

Policy

We have established a set of Operational Rules for Response to Customers (compliant with ISO 10002 and JIS Q 10002) to provide guidelines to group companies in Japan for responding to inquiries and complaints from customers.

We have also stipulated the following provisions as part of our Operational Rules for Response to Customers:

- We strive to deliver the utmost satisfaction to all customers;
- We approach our customers and utilize their opinions in our management decisions

Following the above rules and policies, each site in Japan has implemented a Management System for Response to Customers as a mechanism for utilizing information received from customers in its management approach. These sites conduct periodic self-audits and make other efforts to improve the quality of customer relations. Outside of Japan also, we have implemented ISO-compliant management systems based on the Operational Rules for Response to Customers and tailored to the legal system in each country or region.

Responsible Executive and Framework

The Group Chief Technology Officer (Group CTO) is the Executive Officer responsible for the CS of the Group (as of August 2025).

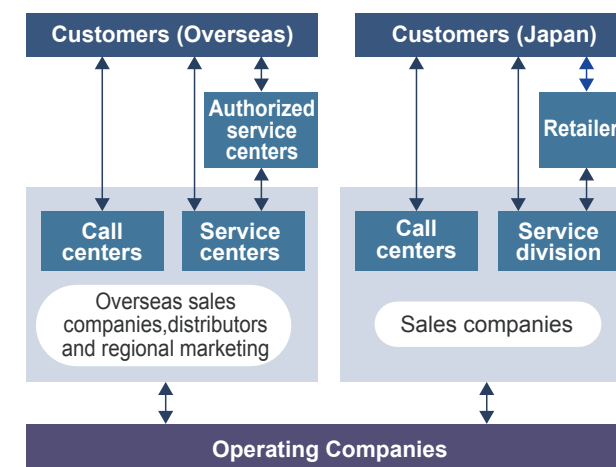
The CS departments at each of the 6 operating companies cooperate to implement the Group's customer satisfaction initiatives. Overseas, the CS departments of Panasonic Group's sales companies around the world collect local information concerning services and quality, as well as customer requests and so forth. This information is used to ensure the quality and safety of products and to help

develop products that match the needs of customers in each department.

CS staff in Japan and abroad share the knowledge and experience that they have accumulated to endeavor to provide better customer service around the world.

Customer Relations Structure (as of August 2025)

*Example based on home appliance products



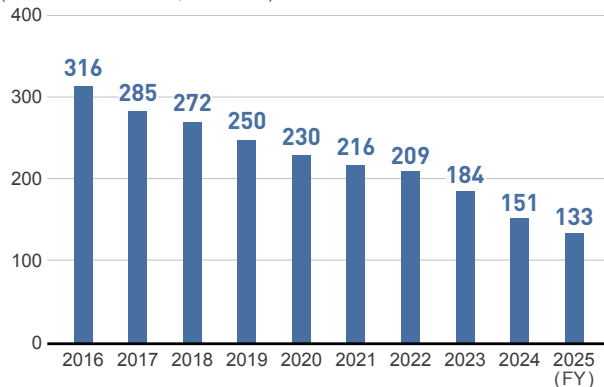
Customer Inquiry Response System

In Japan, we deal with inquiries from customers before they purchase products as well as with their concerns about how to use them after purchase through the Customer Care Center. The Customer Care Center is open from 9:00 am to 6:00 pm, Monday through Saturday, excluding Sundays, national holidays, and the first three days of the new year. There are separate phone numbers for each product. Customers rarely spend a long time on hold; the Customer Care Center is organized to provide accurate and rapid service. We accept inquiries for residential equipment and building materials products 365 days a year.

When customers make inquiries on the Panasonic website by typing in a question, the site displays multiple relevant FAQs. Thus, the company strives to provide quick responses to questions. Regarding the content of its FAQ pages, the company analyzes the search keywords that bring customers to FAQs, as well as the number of times that the questions are viewed, to increase the precision of the FAQs, so that the information that customers require is accurate and displayed quickly. The company has also been undertaking initiatives to utilize Facebook and other social media platforms to post various types of helpful information in a timely manner, such as when the seasons change, and to entice customers to visit relevant FAQ pages using LINE's autoreply service. Because these FAQs are organized so that customer's problems can be solved without the customer needing to contact the Customer Care Center, the number of inquiries at the center is trending downward. Panasonic group sales companies and sales agencies operate call centers in each country/region outside of Japan as well, handling all types of inquiries as well as intake for repairs. The website for each country also includes FAQs, and we are working on building ways to allow customers to resolve their own issues as they are able to in Japan.

Number of Inquiries at the Customer Care Center (for Individual Customers) Over Time *In Japan

(Number of cases: 10,000 cases)



Repair Service Organization

The CS Company (repairs and spare parts department) of Panasonic Marketing Japan Co., Ltd. is in charge of repair services for consumer electronics products in Japan. Panasonic Techno Service Co. is in charge of housing facility products. These service companies constitute a network across Japan and employ full-time customer engineers who have close ties to their local regions as well as advanced technical skills and experience. The network provides swift and reliable on-site repair services in response to customer requests. The repair services system is organized such that repair requests are received 24 hours per day, 365 days per year; Panasonic Group makes particular efforts to provide repair services as quickly as possible for products that are everyday necessities.

- Number of Service Locations of the CS Company, Panasonic Marketing Japan Co., Ltd. and affiliates: 101 locations throughout Japan (as of April 2025)
- Number of Service Locations of Panasonic Techno Service Co., Ltd.: 32 locations (as of April 2025)

Initiatives for Improving Repair Service Contact Point

For household appliance repairs in Japan, we have made arrangements for receiving requests via websites and for courier services to pick up customers' products before repair and to deliver the repaired products when they are ready with the goal of making it more convenient for customers requesting repairs.

Customers can get a diagnosis from our website before requesting for repairs, allowing them to confidently use our online repair service. To receive a diagnosis, customers enter their product numbers and select the appropriate symptoms, and the system provides useful troubleshooting approaches to solving their problems. If the system deems repairs to be necessary or is unable to resolve their problems, customers can review the estimated costs for repairs and apply for them.

Global Repair Service Centers

For customers outside Japan, Panasonic sales companies, call centers and service centers operated by distributors, and call centers and certified service providers commissioned by sales companies or distributors offer repair services meeting local needs and business practices. We have been strengthening our initiatives in each country toward improving experiential value through the repair services and responses to inquiries we offer our customers. We are also working to communicate with customers on social media.

We are striving to improve and provide better service by using questionnaires to get customers' opinions about our response. As measures to contribute to environmental protection in the after-sales field in response to recently heightened environmental awareness, we are focusing on reducing waste through recycling together with cutting down on on-site repairs by providing a more comprehensive FAQ and remote diagnosis. Moreover, we are establishing a system to provide information and other services to our customers in line with the "right to repair" legislation that is being enacted mainly in Europe and the United States.

Number of Repair Service Centers (FY2026)

Region	Number of Repair Service Centers
Japan ^{*1}	133
North America	345
Latin America	662
Europe & CIS	1,023
Southeast Asia & Pacific	1,639
India, South Asia, Middle East & Africa	650
China & Northeast Asia	3,121

*1 Japan: CS Company, Panasonic Marketing Japan Co., Ltd. and affiliates, Panasonic Techno Service Co.

■ CS System for Enterprise Business

Electrical & Housing Equipment and Appliances

Through its corporate customer support window for lighting fixtures, information systems, electrical facility materials, housing facilities and materials and energy-related products such as solar power generators, power storage facilities etc.—Panasonic Group has created a rapid system that can respond to its corporate customers (partners) with problems regarding construction, installation, and configuration 365 days a year.

Commercial Equipment

In the area of commercial equipment—which includes video, security, information communications, and commercial air conditioning equipment—Panasonic Group's sales companies in each field provide unified support at every stage, from proposals for devices and systems to their design, construction, customer inquiries, and repair services. By providing total solutions that meet its customers' needs, the Group strives to improve its CS.

Commercial Solutions

The Panasonic Group sales division in charge of commercial solutions, our sales companies and sales partners of our products understand the diverse needs of individual customers and provide total solutions that optimize operations and improve productivity at our customers' sites, including everything from system implementation to sales, construction, maintenance, repairs, operations services, and cloud services. These solutions support customers in the implementation of their product strategies and the improvement of their operations. Through its CS-related activities, the Company uses its points of contact with its customers—including support desks, repair services, and maintenance—to build trusting relationships. Panasonic Group has created a responsive system that provides quick, continuous support to its customers when they experience difficulties.

Reflecting Voices of Customers in the Products and Services (VOC Activities)

To improve our business activities, Panasonic utilizes analysis of customers opinions (Voice of Customer, VOC) by text mining tools (Mieruka Engine) to promptly understand overall trends and acquire useful information.

The voices of customers are heard via the opinions received through the Customer Care Center and Panasonic Group's sales persons and partners, showrooms, and service companies. We use the results of these analyses for product development, functionality, quality, updates to instruction manuals and catalogs, and improvement of sales activities through a collaboration

between product planning, design, technology, and quality control departments on one hand, and their marketing and sales departments on the other. Panasonic Group considers those VOC activities to be practical implementations of its Basic Business Philosophy, which aims to improve customer satisfaction. The company encourages all employees to engage with the voices of the company's customers throughout various aspects of their work.

STEP1

Respond to customer inquiries and issues

Our Customer Care Center responds to the inquiries and issues brought up in telephone calls and letters received from customers on a daily basis. Marketing divisions also receive opinions from customers through sales people and partners.

STEP2

Analyze the customer's opinion

Customer opinions are recorded, entered into a database, and analyzed every day.

STEP3

Identify areas in need of improvement based on customer opinions

Customer opinions are analyzed to identify the root of the problem, such as how easy it is to use a product or understand a user manual, and raised as possible areas in need of improvement.

STEP4

Learning from our customers' opinions to improve products, user manuals, etc.

Meetings are held in divisions in charge of product development and user manuals to discuss issues that have been raised and look for ways to improve products and services.

Outside of Japan, Panasonic Group strives to improve its customer relations by using Net Promoter Score (NPS) surveys and post-repair questionnaires to evaluate the performance of authorized service providers and service engineers, who are one of the points of contact with our customers.

Response to the Act for Eliminating Discrimination against Persons with Disabilities

The amendment to the Act for Eliminating Discrimination against Persons with Disabilities (obliging companies to provide reasonable arrangements for disabled persons) came into effect on April 1, 2024.

When Panasonic receives requests from disabled persons, we will sincerely consider how to respond on a case-by-case basis and take action in accordance with this Act.

Promoting the Acquisition of Consumer Affairs Advisor Credentials

Panasonic Group actively promotes the acquisition by its employees in Japan of the “Consumer Affairs Advisor”^{*2} credentials with the aim of fostering a customer-oriented corporate culture. Credential holders play an active role as leaders to realize a consumer-oriented management. As of April 1, 2025, 301 employees affiliated with the Panasonic Group had acquired this certification.

*2 Consumer Affairs Advisor System

The Consumer Affairs Advisor System consists of a qualification based on certification under the authority of the Prime Minister and the Minister of Economy, Trade and Industry. (Examination and certification organization: the Japan Industrial Association, General Incorporated Foundation.) As a bridge between consumers, companies, and the government, the System aims to effectively reflect the ideas and recommendations of consumers to corporate management and government administration. The goal is to foster individuals who can contribute to society in a wide range of fields, including by being able to provide quick and appropriate advice in response to consumer complaints. (From the Japan Industrial Association website)

Customer Month Initiatives

We believe that it will become even more important to provide useful services to our customers in Japan in the future. Therefore, we have established a Customer Month in line with the Consumer Month^{*3} designated by the Japanese government, as we work to foster a customer-oriented mindset among all employees through the following initiatives.

1. The Group within Japan create a unique Customer Month poster (in a digital format) to spread the word about Customer Month by distributing it to all operating companies and including it in on portal site, digital signage and the like.
2. The Group also holds a Customer Month Symposium in Japan for all employees, including those responsible for consumer-related activities across all operating companies, to promote consumer-oriented management. We asked a speaker to give a lecture in fiscal 2026, titled “Realizing a Rich and Fulfilling Living Environment—Our Efforts Through Patient Clothing ‘lifte’,” gaining insights into how to incorporate diverse perspectives from various stakeholders as a B2B company, as well as efforts toward product recycling linked to “green consumption.”

*3 Consumer Month

Japan’s Consumer Protection Fundamental Act (predecessor to the Consumer Basic Act) was enacted in May 1968. On the 20th anniversary of the creation of this law in 1988, May was designated Consumer Month. Every year during this month, consumers, businesses, and government agencies come together to participate in focused work on education and awareness raising concerning consumer issues.



Fiscal 2026 Customer Month Poster

Addressing Social Issues by Raising Awareness

As part of our ESG efforts toward addressing the pressing social issues of countering global warming and promoting carbon-free solutions, we have partnered with local governments, corporations, and companies to provide courses for local communities in Japan, mainly on environmental education.

Our goal is to help participants understand what they can do as members of their communities and raise awareness that drives action on themes that are highly socially relevant and interesting to consumers, such as the environment and energy issues. Recently, we have noticed a marked uptick in the frequency of parent-child study sessions, in which lecturers incorporate complex topics into everyday life situations, and participants learn about energy conservation, using energy from natural sources, and other familiar issues in a fun and easy-to-understand manner. We also actively participate in government-hosted environmental events as part of our broader engagement in promoting education and raising awareness.

☞ Useful Information on Household Appliances (Japanese only)

<https://panasonic.jp/support/useful.html>

The Group’s domestic Japanese-language site provides information to customers, including basic knowledge about electricity, laws and regulations concerning home appliances and their disposal (recycling), along with precautions related to protecting home appliances from disasters including warnings on what to do during natural disasters.

☞ Using home appliance products safely (Japanese only)

https://jpn.faq.panasonic.com/app/answers/detail/a_id/62005

The Panasonic Group provides information to give our customers a better understanding of safety, from how to correctly use their household appliances for safety and product longevity, illustrated using practical and realistic examples.

Responsible Publicity and Advertising

Corporate publicity and advertising is to increase the visibility of brands, products and services within society. However, there is a risk that such content may have a negative impact on general consumers due to expressions and images that lack diversity and consideration for impressionable children. Furthermore, with the development of social media, such effects are likely to spread globally, not only in the country or region where the advertising or promotional campaign activities are carried out. Therefore, companies must maintain high normative awareness and ethics in their communications.

We continue to follow the idea of our founder, Konosuke Matsushita, that "if manufacturers make good products, they have an obligation to communicate that quickly, widely, and correctly to their customers, and that is what advertising does." Furthermore, we recognize the significant social responsibility of disseminating information not only about our products, but also the comprehensive scope of our activities as a corporation. Our efforts to achieve this are informed by the same kind of thinking. The following basic guidelines are based on the philosophy of our founder and reflect our attitude and approach to the day-to-day production of publicity (e.g. creating TV commercials, newspaper ads, and digital ads).

- In the context of our business activities, publicity and advertising fulfil an important social mission.
- This is an activity that effectively communicates the core values and principles that define our company.
- It is vital that facts are presented truthfully and in a manner that is easily comprehensible to our customers.
- We do not cause any discomfort or annoyance.
- Always use a creative and innovative approach.
- Approach our work with a high level of insight, competence and passion.

Policy

Providing accurate and honest information and communications to customers and society at large is the starting point for gaining trust from the same and is essential in both protecting and growing the brand's value. Based on this recognition, the Panasonic Group Code of Ethics & Compliance establishes the following guidelines for our interactions with society.

- We are committed to providing our customers and other stakeholders with fair and accurate information regarding our products, services and technologies. This is achieved through corporate communications, public announcements and advertising. The aim of this is to better inform customers and enhance the company brand. We are committed to transparent communication regarding our Basic Business Philosophy. We continually listen to and learn

from our customers and the wider community. We take the feedback we receive and use it to inform our business activities.

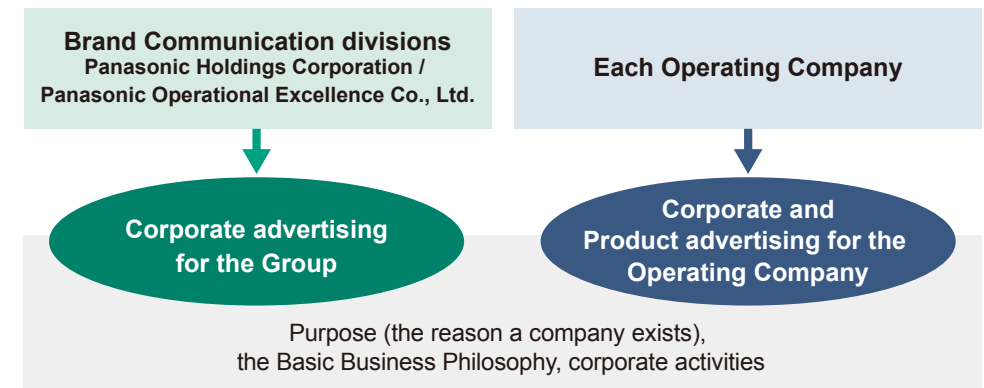
- We base our stakeholders with accurate corporate communications. Our corporate communications respect diversity, do not discriminate against any social group, and uphold the personal dignity of all individuals.

We have also established various sets of rules and guidelines, including the Panasonic Group Basic Rules for Brand Matters, Operational Rules for Digital Media, Panasonic Group Social Media Guidelines, Basic Rules for Intellectual Property Matters, and Operational Rules on Information Security. Our policies and guidelines require the Group to respect the intellectual property, identities and privacy of third parties when carrying out our corporate communications activities.

Responsible Executive and Framework

The Group CEO, who is directly responsible for the Group's brand strategy and communication strategy, handles advertising and publicity activities (as of April 2025).

The brand communication divisions of Panasonic Holdings Corporation and Panasonic Operational Excellence Co., Ltd. are responsible for corporate advertising for the entire Panasonic Group. In a similar way, advertising personnel at each operating company are responsible for their organization's corporate and product advertising. All personnel work in cooperation with one another.



Promoting Fair and Honest Publicity and Advertising

We have established mechanisms that enable us to verify all the publicity we produce against the relevant laws and industry regulations in each global region. This helps us to avoid misunderstandings or misconceptions on the part of our customers. For instance, in Japan, we specialize in training and deploying personnel with expertise in publicity production, and we also ensure that our personnel accrue experience and expertise in expression and risk avoidance. Furthermore, we screen risks with production partners, review expressions with media and advertising agencies, and conduct preliminary studies. We comply with the Act against Unjustifiable Premiums and Misleading Representations and other legal regulations concerning publicity, as well as various self-imposed media guidelines companies use to evaluate their advertisements, including the Japan Advertisers Association Inc.'s ethics code. We also seek review from the Legal Department as necessary. We also avoid using expressions or performances that could potentially hinder children's sound learning and growth. When employing child actors in advertisements, we comply with all the relevant laws and regulations.

To ensure compliance is maintained, OJT will continue to be conducted on a day-to-day basis. Special training sessions will also be held for major revisions to relevant laws, ensuring that those responsible are fully informed. We will also continue to participate in training and seminars conducted by outside organizations and seek consultations with outside experts when necessary.

Furthermore, we aim to address the recent concern regarding the prevention of fraudulent advertisements on websites and social media. We are establishing a system in Japan that will facilitate early detection and response through continuous monitoring. This system will enable us to prevent situations that could allow harm from crime to spread by quickly detecting fraudulent advertisements impersonating our company and websites that publish such advertisements, while also preventing the spread of false information and related comments. We are collaborating with industry associations and relevant government agencies, as well as the relevant departments within the Group, including Legal, Intellectual Property, Information Systems, and Brand departments, in a joint effort to address these issues.

Intellectual Property

Panasonic group strives to appropriately acquire, protect, and utilize technologies, know-how, designs, brands, and other achievements obtained through R&D and other business activities as intellectual property.

By implementing our group's intellectual property in various ways, such as commercialization in our group and co-creation with other companies as well as striving to respect the intellectual property of third parties in our group's business activities, Panasonic Group aims to achieve business growth in our group and achieve solutions to social issues.

Policy

Based on the spirit of "IP (intellectual property) before business" since its founding, Panasonic Group has been promoting intellectual property activities, aimed at ensuring the advantage and safety of its business now and in the future and helping address social issues, by proposing IP-based strategies for its business; acquiring, protecting, and utilizing global intellectual property; and preventing and resolving disputes related to intellectual property.

To consistently achieve these goals, the Group has established its "Basic Rules for Intellectual Property Matters" that apply to the entire Group. We are working to appropriately pursue our intellectual property activities and establish a foundation for our initiatives. In addition, we respect the intellectual property of our suppliers, business partners, and other third parties and do our best not to infringe on them. That is also a stipulation in the "Panasonic Group Compliance Code of Conduct," and we provide regular education to ensure that all employees comply with it.

Responsible Executive and Framework

The Group Chief Technology Officer is the executive officer responsible for intellectual property for the Group (as of August 2025).

The Intellectual Property Department at the Group's holding company, Panasonic Holdings Corporation (PHD), is in charge of establishing and promoting the Group's intellectual property strategies. We have also established an intellectual property division at each Operating Company, and each intellectual property division establishes and promotes intellectual property strategy of each Operating Company. PHD's Intellectual Property Department and the intellectual property divisions of each operating company work together to promote intellectual property strategies, thereby creating group synergy.

In addition, the Intellectual Property Department at Panasonic Operational Excellence Corporation ("PEX") which has highly specialized personnel, and Panasonic IP Management Corporation ("PIPM"), a subsidiary of PEX, are advancing a wide range of intellectual property operations on a global basis.

PIPM was established as a wholly owned subsidiary to integrate and commercialize the Group's intellectual property operations, and is advancing intellectual property operations by utilizing the "Trusts among Persons Belonging to Same Group of Companies" as stipulated in Article 51 of the Trust Business Act.

Intellectual Property Strategy Framework

The Group has formulated an Intellectual Property Strategy Framework through discussions at Board of Directors meetings (see the figure below). This framework shows that our intellectual property (IP) strategies and activities, conducted from the perspectives of "customers," "competitors," and "society" based on our materiality, will contribute to "business advantages" and "business safety" as well as "social implementation through Co-creation with intellectual property as a starting point", and that these will contribute to solving social issues and ultimately lead to the vision we are aiming for.

These strategies and activities are embodied in the framework based on each aspect of intellectual property: "rights," "assets," and "information."

For example, from a "customer" perspective, strategies and activities such as planning and implementation of "co-creation and open & closed strategies" and "IP portfolio (PF) building of core technologies", will lead to output in the form of "improvements in customer value."

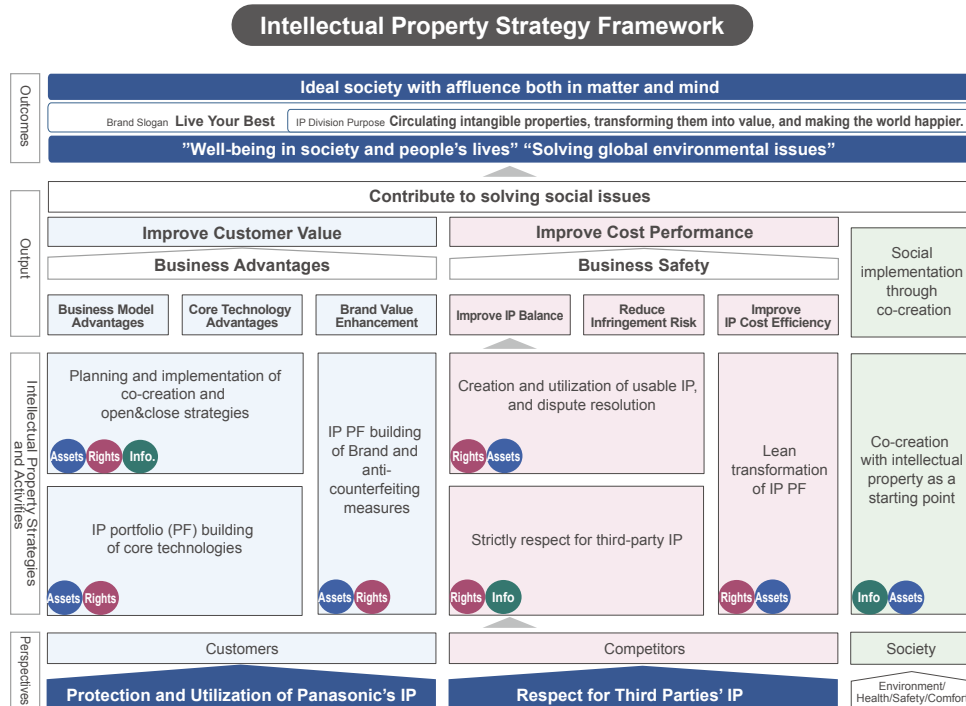
From the "competitors" perspective, strategies and activities such as "dispute resolution", "strict respect for third-party IP", and "lean transformation of our IP portfolio (e.g., abandoning unnecessary IP)" will lead to output in the form of "improvements in cost performance."

From the "social" perspective, strategies and activities such as "Co-creation with intellectual property as a starting point" will lead to outputs such as "social implementation through co-creation" (e.g., commercialization of environmental technologies through co-creation with other companies).

These outputs will lead to our goal of realizing "an ideal society with affluence both in matter and mind."

PHD has introduced "Group-common Indicators of Intellectual Property" shared across the

Group to monitor each IP strategy and activity indicated in the framework. These "Group-common Indicators of Intellectual Property" include, for example, utilization indicator that illustrates the size of IP assets (i.e., intangible assets) and how they are being used (their degree of circulation). We use these "Group-common Indicators of Intellectual Property" to monitor the IP strategies and activities of each operating company and maximize the value of our intangible assets.

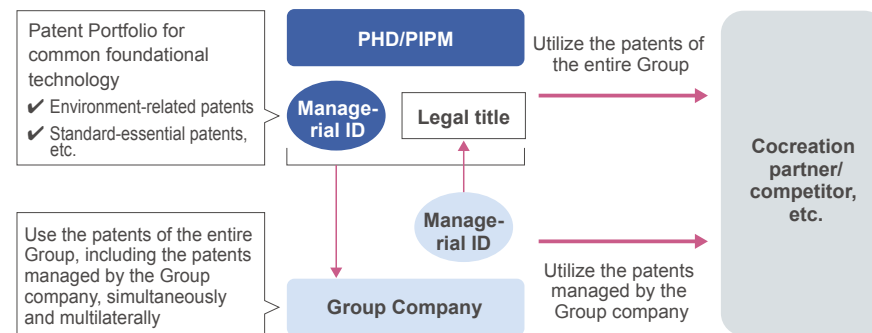


Mechanisms for Consolidating Patents and Other Assets to Create Group Synergies

The Group has set up a mechanism to consolidate patents and other forms of industrial property to PHD so that they can be utilized as assets of the entire Group simultaneously and multilaterally. PHD and its subsidiary, PIPM utilize (e.g. license) the patents, etc. of the entire Group. These include patents related to common foundational technology and patents with legal title consolidated from our Group companies. The Group companies in Japan that are subject to this mechanism manage the patents, etc. they have created or obtained (i.e., they retain the "Managerial ID" (Managerial code) as the identification of responsibility for managing such

patents, etc.), and such Group companies bear the costs and receive the revenues from them, even after their legal title has been consolidated to PHD. The Group company can then use the patents, etc. of the entire Group, and externally utilize those for which it holds the Managerial ID. The Group promotes both internal and external co-creation, etc., using this mechanism (see figure below).

Mechanism of Patent Consolidation to Create Group Synergies



Acquiring Intellectual Property Rights and Reward System

Panasonic Group has been building up a global portfolio of intellectual property in line with our IP strategy, which in turn is based on our business strategies and research and development strategies. The following table shows the fiscal 2025's R&D expenses; the number of new applications for patents, utility models, or design rights made by Panasonic Group in fiscal 2025; and the number of patents, utility models, designs, and trademarks held by the Group as of March 2025.

R&D expenses in fiscal 2025	477,800 million JPY (the ratio of R&D expenses to sales: 5.6%)
Number of applications in fiscal 2025	Number of applications for patents, utility models, and designs: Total roughly 16,000 (including roughly 9,000 outside Japan)
Number of rights held as of March 2025	Number of patents, utility models, and designs held: Total roughly: 95,000 (including roughly 53,000 outside Japan)
	Number of trademarks held: Total roughly 15,000 (including roughly 11,000 outside Japan)

If the Group's intellectual property is not properly protected and utilized, counterfeit or infringing products involving that intellectual property may emerge, causing quality problems, generating inflows of funds to criminal organizations, and other problems that may inhibit sustainable innovation. Going forward, the Group will continue to acquire the results of research and development and business activities in the form of intellectual property, and will strive to further protect and utilize intellectual property.

The Panasonic Group also has a reward system for inventors designed to increase their motivation and help invigorate their inventions and creative endeavors, and we operate this system in a just and fair manner based on the laws and regulations of each country. For example, in Japan, the standard for reward is decided through agreements with employees and shared with them, and we also have a system in place to solicit feedback from inventors about the reward system.

Respect for Intellectual Property of Third Parties

If we infringe on the intellectual property of a third party, there is a risk of causing losses to that third party and inconvenience to our direct and indirect customers due to changes in specifications or interruptions in the supply of our products or services.

The Group conducts its business activities while striving to respect third parties' intellectual property. Our Groupwide internal rules stipulate how to respond when a third party contacts us with a suspicion of intellectual property rights infringement and how to estimate losses in the event of such infringement. The internal rules of each Operating company also stipulate how to conduct investigations, report discovered risks, and follow other processes to prevent infringement of third-party intellectual property rights.

Contributions to Building Co-creation Relationships

The Group aims to contribute to solving social issues in its business activities. In addition to facing social issues head-on, contributing to their resolution, and growing our business as a result, we are also promoting a new intellectual property strategy by building a system that connects and cooperates between a wide range of people, goods, and things, and building co-creation relationships based on intangible assets to solve social issues that are difficult for individual companies to address.

Specifically, in September 2023, we opened "Technology Index" for external use. The Technology Index is a system that enables users to easily find and connect with the technology they need by indexing the Group's intellectual property information in easy-to-understand, sensible language that describes the technology's usage scenarios and purposes. Taking the Technology Index as a starting point, we will contribute to accelerating the resolution of social

issues, including the resolution of global environmental problems, by circulating intangible assets throughout society.

🔗 **Technology Index Top** (Japanese only)

<https://co-creation.holdings.panasonic.jp/techidx/>

Additionally, in October 2024, we launched IP Junction, a co-creation and innovation hub for intangible assets. IP Junction is a platform for distributing and matching information that assists in co-creation with all our partners who have diverse technologies and ideas so that we can expand the use of shared knowledge accumulated through the Technology Index. We collect, index, and link data on intangible assets within and outside the Group to facilitate the sharing of intangible assets and accelerate the creation of shared knowledge.

🔗 **IP JUNCTION** (Japanese only)

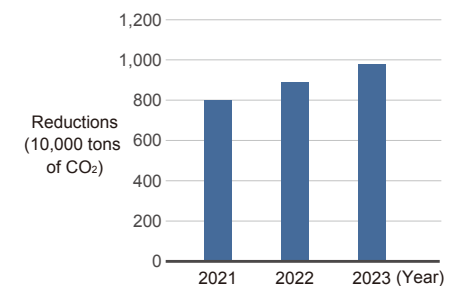
<https://co-creation.holdings.panasonic.jp/ip-jct/>

Co-Creation Contribution to Solving Societal Challenges

As mentioned above, our group announced its long-term environmental vision, "Panasonic GREEN IMPACT (PGI)", in January 2022. Since then, we have been accelerating efforts to reduce the environmental burden across the entire value chain while also contributing to the reduction of CO₂ emissions for society and our customers. The "CONTRIBUTION IMPACT" of PGI refers to our contribution to reducing CO₂ emissions in society and for our customers through the provision of our own products and services. At the same time, our group holds a large portfolio of intellectual property related to environmental technologies, and we aim to promote social implementation and contribute to solving societal challenges by strategically building co-creation partnerships with other companies.

For example, by allowing our intellectual property to be used by our co-creation partners in the field of vehicle batteries, we are helping to reduce CO₂ emissions by replacing gasoline-powered vehicles with electric and hybrid vehicles.¹ Similarly, by allowing our co-creation partners to utilize our intellectual property in high-performance vacuum insulated glass, the technology has been adopted for building window materials, replacing single-pane and double-pane glass, thereby contributing to CO₂ reduction.² For example, we estimate that in 2023, the effects of CO₂ reductions of electric vehicles equipped with lithium-ion batteries using

Estimated CO₂ Emission Reductions of Electric Vehicles Equipped with Batteries Using our Intellectual Property



our intellectual property is 9.78 million tons of CO₂ emissions.*³

Our group is also actively engaged in the development of future environmental technologies and holds a substantial portfolio of intellectual property. Through these efforts, we aim to continue contributing to the dissemination of sustainable technologies and the reduction of CO₂ emissions. For example, we commissioned astamuse company, Ltd. to conduct a carbon reduction potential analysis*⁴ of environmental technologies, and our group's technologies were featured in their published report.*⁵

Addressing societal challenges such as climate change is not something our group can tackle alone. Panasonic Intellectual Property Division will continue to promote social implementation and aim to contribute to solving societal challenges by building co-creation partnerships with other companies, leveraging intellectual property as a starting point.

*1 CO₂ reductions from automotive batteries: The difference in CO₂ emissions during running (using) between gasoline-powered vehicles and electric vehicles equipped with batteries that incorporate our intellectual property.

*2 CO₂ reductions from vacuum insulated glass: The difference in CO₂ emissions from the energy required to operate air conditioning systems when using vacuum insulated glass incorporating our intellectual property, compared to single-pane or double-pane glass.

*3 The flow method (emissions for the entire lifetime of the vehicle are accounted for in the year of sale) is used to calculate the difference in CO₂ emissions during running (using) between a gasoline-powered vehicle and an electric vehicle equipped with batteries using our intellectual property. The CO₂ emissions from battery production were calculated and subtracted from the total. Compared to last year's estimate, we refined the baseline data—such as fuel efficiency for gasoline vehicles and energy efficiency for electric vehicles—for greater accuracy. All graphs were calculated based on the same methodology across all years.

*4 Based on investment data and other sources, astamuse company, Ltd. analyzes carbon reduction challenges primarily from a technological perspective. The company provides a comprehensive overview of technologies that contribute to solving these challenges and quantitatively evaluates the "carbon reduction potential" of each technology.

*5 https://www.astamuse.co.jp/news/2025/250509_cn/ (Japanese only)

Participation in International Initiatives

WIPO GREEN, established by the World Intellectual Property Organization (WIPO) supports global-scale approaches against climate change through connecting key stakeholders when it comes to environmentally-conscious innovations using its database and networks. The Panasonic Group agrees with this mission and has registered environmentally-conscious underwater plasma technologies, artificial photosynthesis technologies, and gas sensor technologies.

Anti-Counterfeit Activities

Counterfeit products that use important corporate assets such as brands and other intellectual property without permission, and piggyback on the brand value built up by the rights holders not only cause quality problems (accidents and injuries) for customers, but also give rise to the following problems for society as a whole and can be an obstacle to the creation of a healthy society.

- Economic losses: decreasing tax revenues, less business incentives to develop new products and innovation.
- Security issues: potential sources of funds for criminal/ terrorist organizations, increasing threats to national security.
- Environmental problems: disposal of seized counterfeit goods

Thus, aiming to eliminate counterfeit goods should be considered a Corporate Social Responsibility. Our anti-counterfeit policies aim to solve the social issues caused by counterfeit products and protect our customers and intellectual property, including brands. In 2019, measures against counterfeit products were added to the Japanese government's SDGs Action Plan, thanks in part to advocacy from the Panasonic Group. At present, we are working in partnership with the Japanese government, other companies, and the governments of other countries at the International Intellectual Property Protection Forum (IIPPF), an industry organization that aims to resolve the counterfeit issue, to take action based on the idea that eliminating counterfeit products will contribute to achieving SDGs. Recent trends show a rapid increase in the number of counterfeit goods sold online, in addition to those sold in actual markets. Online sales make selling counterfeit products easier globally than conventional retail methods— transactions are made easily and carried out before the buyer ever sees the actual product, meaning that there is an increasing risk that consumers could purchase them by mistake. Panasonic Group believes that it is more critical than ever that rights holders work together with consumers to eliminate counterfeit goods and work aiming to create a better world. In recent years, we have begun posting monthly updates regularly on social media to engage with the growing number of users on these platforms.

Example)

<https://twitter.com/PanasonicBrand/status/1759463303867466126> (Japanese only)

Our Approach to Brand Protection

<https://holdings.panasonic/global/corporate/about/intellectual-property/brand-protection/statement.html>

In-House Education and External Consumer Awareness-Raising

Panasonic Group conducts various training and education programs for employees to ensure they thoroughly implement Panasonic's policy on intellectual property. Alongside the above-mentioned employee education on respecting third-party intellectual property, we provide e-Learning on copyright for employees in Japan and overseas, taking into account importance of software in business and the rapid spread of generative AI in recent years.

In addition, each Operating Company also provides training and education on intellectual property to meet their specific business needs. For employees engaged in intellectual property operations, we provide a wide range of training and education with a view to achieving business success, including training on project management and training to improve IP-related expertise.

We also help raise awareness of intellectual property issues outside the Company. One such example is dispatching lecturers to HR development trainings for overseas governmental authorities such as patent office staff upon request by the Japan Patent Office. We also give our unique lectures on intellectual property at Japanese junior high and high schools. In addition, to address the issue caused by counterfeited products, we manufacture the consumer awareness videos and introduce them at our website.

[🔗](https://holdings.panasonic/global/corporate/about/intellectual-property/brand-protection.html) **Panasonic's efforts to raise awareness about eliminating counterfeit goods**

<https://holdings.panasonic/global/corporate/about/intellectual-property/brand-protection.html>

Consultation & Whistleblowing

All Group employees, business partners, and their employees can seek consultation and report any intellectual property-related risks or problems they see or hear about through the global hotline Panasonic has set up. For more details, see the "Whistleblowing System" in the "Compliance" chapter ([page 146-](#)).

Evaluations

Panasonic Group has been recognized as a Clarivate Top 100 Global Innovator 2025 chosen by London-based Clarivate. The award that Panasonic Group received is given to companies that are leaders in global business because they are successful in protecting and commercializing their unique inventions and ideas through intellectual property rights. Panasonic Group has been on this list since its inception, 2025 being our 14th consecutive year.

The Panasonic brands were also honored in Clarivate's Top 100 Best Protected Global Brands (in 2021), a testament to the fact that the Group properly protects its brand. Furthermore, the Panasonic GREEN IMPACT brands were also honored in Clarivate's Top 100 New Brands in

2023 as new brands that have surged into the public sphere since 2021 and demonstrated an exceptional ability to bring value, impact, and protection on a global scale.

Community Relations

Based on the recognition that Panasonic Group is a public entity of society and that society at large has entrusted us with all the resources we need to do business, we maintain dialogues with local communities as we undertake our business.

The Group contributes positively to local communities and seeks to minimize any potentially negative impacts of entering or leaving a market through dialogues with local governments and residents and impact assessments on the environment and other areas.

Alongside our business operations, we actively promote corporate citizenship activities as a member of the local community and strive to ensure that the company develops together with the communities where our sites are located.

Policy

Aiming to achieve an ideal society with affluence both in matter and mind, we are working to address social issues and create new social value through our corporate citizenship activities, as well as our business activities. In advancing our activities, we have established three key themes: “ending poverty,” Goal 1 of the SDGs and a priority since our founding; “environment(al issues),” a pressing global challenge; and “human resource development (learning support),” the foundation for addressing these challenges.

We encourage our employees to become active participants. Moreover, by leveraging our products, technologies, and the expertise and resources we have cultivated through manufacturing, we aim to help address social issues and achieve a sustainable, inclusive society in collaboration with our stakeholders.

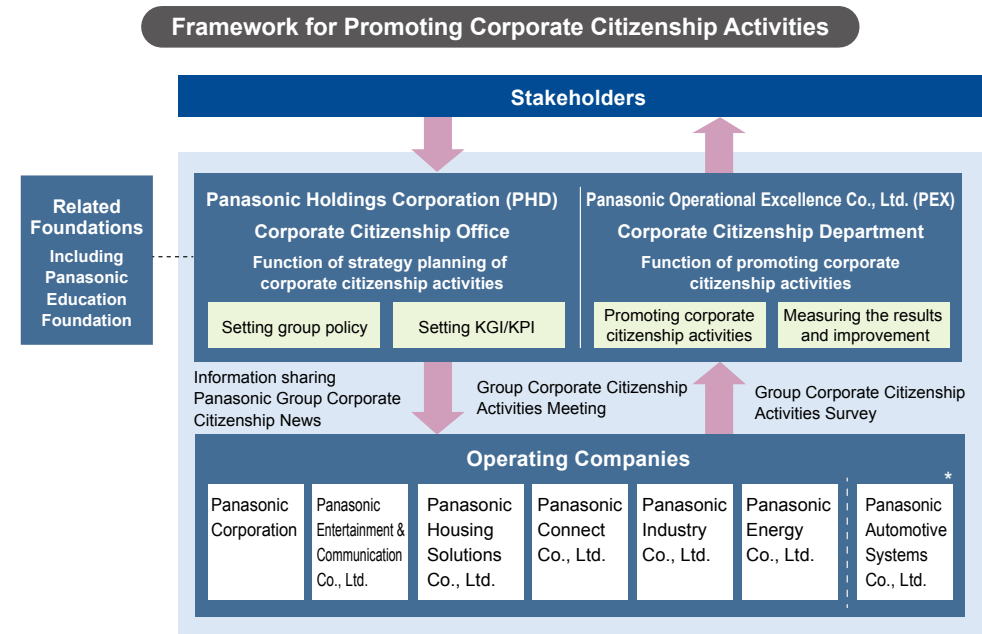
🔗 Corporate citizenship activities

<https://holdings.panasonic/global/corporate/sustainability/citizenship.html>

Responsible Executive and Framework

Corporate citizenship activities are directly managed by the Group CEO (as of August 2025). The Corporate Citizenship Office at Panasonic Holdings Corporation (“PHD”) is responsible for strategic planning across the entire Panasonic Group. It performs those duties in cooperation with the Corporate Citizenship Department at Panasonic Operational Excellence Co., Ltd. (“PEX”) and the Group’s operating companies. We have individuals in charge of corporate citizenship activities at each operating company, and they execute their activities based on the actual conditions within each company and its respective region. In addition, their activities are shared through Panasonic Group Corporate Citizenship News with the relevant directors and

executives—from the Panasonic Group CEO on down—as well as with the staff in charge of corporate citizenship activities worldwide.



* Panasonic Holdings Corporation (“PHD”) has formed a strategic joint partnership with the Apollo Group in the business of Panasonic Automotive Systems Co., Ltd. (“PAS”). As a result, PAS is no longer a consolidated subsidiary of PHD, and Star Japan Holdings (including PAS as a sub-subsidiary) has become an equity-method affiliate of PHD. For more information, please refer to the following news release.

[🔗 https://news.panasonic.com/global/press/en241202-6](https://news.panasonic.com/global/press/en241202-6)

Employee Participation and Supporting Systems

Enhancing employee interest in social issues and their desire to address them is extremely important both in terms of promoting corporate citizenship activities and carrying out our core business. The Group encourages employees to participate by providing information on volunteer activities and lectures and offering menus relevant to social issues at company cafeterias. Some of the most characteristic examples of these are shown below.

■ Activities Supporting Employees' Social Involvement

LIGHT UP THE FUTURE “AKARI Action Project”

This donation drive delivers solar lanterns to areas without electricity, using funds collected through cafeteria points from the Employee Benefits Service and donations of used books, DVDs, and other secondhand items. Since we began this drive in 2009, we have delivered approximately 130,000 solar lanterns to 36 countries. In fiscal 2025, a total of 400 employees donated their cafeteria points, and we collected 21,705 secondhand items from the general public and our employees, donating 2,790 solar lanterns.

🔗 LIGHT UP THE FUTURE “AKARI Action Project”

<https://holdings.panasonic/global/corporate/sustainability/citizenship/solution/akari.html>

Panasonic ECO RELAY for Sustainable Earth

These are environmental conservation activities in which employees worldwide collaborate with local communities, children, and families to help build a sustainable global environment and society. In fiscal 2025, 72 locations worldwide participated in cleanup and tree-planting campaigns.

We are also promoting the Panasonic ECO RELAY World Action initiative, which aims to encourage all employees worldwide to incorporate environmental conservation into their daily routines.

🔗 Panasonic ECO RELAY for Sustainable Earth

<https://holdings.panasonic/global/corporate/sustainability/citizenship/environment/per.html>

Provision of Sustainable Seafood*¹ at Company Cafeteria (Japan)

Panasonic was the first company in Japan to start offering sustainable seafood at its company cafeterias on an ongoing basis. The initiative, which began in March 2018 at two locations, has been in place at a total of 57 locations in Japan (as of March 31, 2025). Through the food served and consumed at cafeterias, we aim to raise awareness of the world's fishery resources in crisis, encourage changes in consumption behavior, and expand our impact on our surroundings.

*¹ Seafood certified for sustainable production (fishing and aquaculture) as well as management and traceability in processing, distribution, and marketing.

🔗 Spreading sustainable seafood from the company cafeteria

https://holdings.panasonic/global/corporate/sustainability/citizenship/sustainable_seafood.html

Fukushima Reconstruction Support Action (Japan)

We have taken the initiative to provide employees with opportunities to learn the truth about the

situation in Fukushima and support the area in its recovery from the earthquake and tsunami, as well as the effects of the lingering harmful rumors. The initiative involves providing menus featuring agricultural, livestock, and marine products from Fukushima Prefecture in company cafeterias and holding our Fukushima Marché [Market] to sell products from the prefecture. We first offered the menu at two company cafeterias in January 2022 and have since expanded to a total of 24 locations (as of March 31, 2025). The Fukushima Marché started in September 2022 and operates at a total of 14 locations (as of March 31, 2025). We continually work to raise awareness among employees about Fukushima Prefecture's efforts to ensure food safety and security through lectures by prefectural officials.

🔗 Fukushima Reconstruction Support Action

<https://holdings.panasonic/global/corporate/sustainability/citizenship/other.html#fukushima>

Pro Bono Program (Japan)

This program helps NGOs and NPOs engaged in addressing social issues to improve their operational capacity by leveraging the skills and experiences our employees have cultivated through their work. Since the program began in 2011, 422 employees have assisted 70 organizations in formulating medium-term action plans, creating marketing materials, and rebuilding their websites.

🔗 Panasonic NPO/NGO Support Pro Bono

<https://holdings.panasonic/global/corporate/sustainability/citizenship/pnsf/probono.html>

Introducing Regional Volunteer Activities and Providing Opportunities

Workplaces within the Group around the world take an active role in developing and rolling out a variety of volunteer activities that are tailored to the specific features of the regions and operating companies they are part of. In North America, for example, the Group has an employee volunteer program and annual Month of Service initiative through which we encourage employees to volunteer. In China, several times each year we have China Region Group Volunteer Activities in which employees at various workplaces across China undertake volunteer activities related to the same theme at the same time. In Japan, we also provided our employees with information on volunteer opportunities organized by NPOs and other organizations, and in fiscal 2025, a total of 280 employees volunteered outside the company.

Providing Learning Opportunities (Japan)

We hosted the Social Good Meetup (SGM), a lecture series for employees featuring diverse guest speakers who are engaged in addressing social issues, to raise awareness of these issues and motivate employees to take action. In fiscal 2025, a total of 1,674 employees attended these lectures. Moreover, we offer a Disaster Volunteer Training Course to equip

employees with the knowledge and skills necessary to volunteer in response to frequent natural disasters.

🔗 Lectures for employees regarding social issues, Social Good Meetup (SGM) (Japanese only)

<https://holdings.panasonic.jp/corporate/sustainability/citizenship/sgm.html>

🔗 Disaster Volunteer Training Course (Japanese only)

<https://holdings.panasonic.jp/corporate/sustainability/citizenship/disaster.html#volunteer>

■ Human Resources System for Supporting the Promotion of Employee Participation

Examples of Major Group Companies in Japan

◇ Flexible Work Styles for Participating in Volunteering

We have expanded the options of our diverse work styles to encourage employees to take on the challenge of volunteering. Specifically, we offer a scheduling system with reduced hours/reduced workdays that enables employees to balance volunteering and work and a leave-of-absence system that allows for long-term volunteering for up to one year (the required period for those joining the Japan Overseas Cooperation Volunteers). Additionally, we encourage employees to volunteer using various types of leave, such as the ten days of “Challenge Leave” granted to employees who reach a milestone age. We also have a policy of allowing employees to take five consecutive days out of their 25 days of annual paid leave for volunteering.

◇ In-House Community Activities and Awards

Panasonic Group encourages employees who share common interests and sensitivity to issues, regardless of their company affiliation or position, to voluntarily form communities and engage in various projects through Employee Resource Groups (ERGs). The Cross UNLOCK Award is included in the Group CEO Award to support and raise awareness of these employees' various spontaneous activities. In the past, the award was presented to efforts toward “creating a workplace comfortable for people who can and cannot hear” and “creating accessibility maps of business site premises” for their contributions to stimulating the organizational culture to enable every diverse individual to demonstrate their individuality. Furthermore, there is a Social Contribution Award to recognize employees' active and ongoing participation in related activities.

Examples from North America

Several business units in Panasonic North America provide paid time off that allow employees to spend up to five full working days on volunteer activities to give back and contribute to their local communities. We also encourage and facilitate participation in volunteer activities on the

part of our employees, including by coordinating volunteer activities at individual business sites.

Examples from Europe

To further encourage social involvement, some Group companies in Europe allow employees to take up to 16 hours of paid leave per year for volunteer work.

Performance Evaluation of Corporate Citizenship Activities

We measure the effectiveness of its main activities according to the specifics of each initiative.

LIGHT UP THE FUTURE

The LIGHT UP THE FUTURE project brings light to areas without electricity in collaboration with various partners, including NGOs/NPOs and international organizations. It aims to create opportunities for education, health, and increased income through local support programs, in addition to the solar lantern donations. To evaluate the effectiveness of these initiatives, we conducted an impact assessment. The following presents one example of the findings.

[The result of the survey conducted in Kenya by the United Nations Population Fund (UNFPA) in 2023]

- Approximately 80% of school-going children reported that their learning time at home increased (33% reported a one-hour increase, 42% two hours, and 8% three hours or more).
- Women engaged in home-based work, such as bead-making, showed an average 1.5-fold increase in income.

🔗 Reports by cooperating organizations

<https://holdings.panasonic/global/corporate/sustainability/citizenship/lutf.html#cooperation>

Panasonic NPO/NGO Support Fund for SDGs

Regarding the Panasonic NPO/NGO Support Fund for SDGs, which supports the enhancement of the organizational infrastructure of NPOs/NGOs, we conduct a follow-up survey of the grant recipients 18 months after the completion of the subsidy project. A third party also quantitatively and qualitatively evaluates the effectiveness of the organizational infrastructure enhancement. In 2024, we conducted a follow-up survey of 12 organizations (six for overseas support and six for domestic) whose grant periods ended in 2022. Ten organizations reported an increase in ordinary income compared to when they applied, with one organization tripling its ordinary income and another doubling it. Through this program to reinforce organizational foundations, nine organizations reported that they had resolved 80% or more of their organizational issues. Moreover, 11 organizations reported that their reinforcing efforts had contributed to ending

poverty. These results demonstrate the effectiveness of this grant program in strengthening organizational foundations.

🔗 **2024 report on the follow-up survey for the Panasonic NPO/NGO Support Fund for SDGs (Japanese only)**

https://holdings.panasonic.jp/corporate/sustainability/citizenship/pnsf/npo_summary/2024_building.html

My Future Discovery Program

In the My Future Discovery Program, a career education program for junior high school students, we conduct an annual survey of teachers and students to inform improvements based on its usefulness and the impact it has on students.

In the fiscal 2025 survey, 95% of students reported that they could understand the lessons, and 96% reported that the lessons inspired them to think about their future. Children who participated in the program shared impressions such as, "I enjoyed thinking about my future," and "I won't forget that all subjects are useful for the future." These results demonstrate the benefits of this program for children.

🔗 **Survey results for the schools using the My Future Discovery Program in fiscal 2025 (Japanese only)**

<https://holdings.panasonic.jp/corporate/sustainability/citizenship/career/powerup/2503-2.html>

External Recognition and Awards Won

Panasonic received the following major awards and external evaluations in fiscal 2025:

■ Panasonic Holdings

Awarded the Grand Prize for the My Future Discovery career education program at METI's 14th Career Education Awards

■ Panasonic Group

Awarded a Special Award for its employees' disaster volunteering at the Tokyo Voluntary Action Center's 10th Corporate Volunteer Awards

■ Panasonic Group

Certified as a Platinum Partner (for the twelfth consecutive year) under Table for Two's meal sharing program in developing countries

■ Panasonic Life Solutions India

Awarded the CSR & Sustainability Award 2025 by the All India Business & Community Foundation

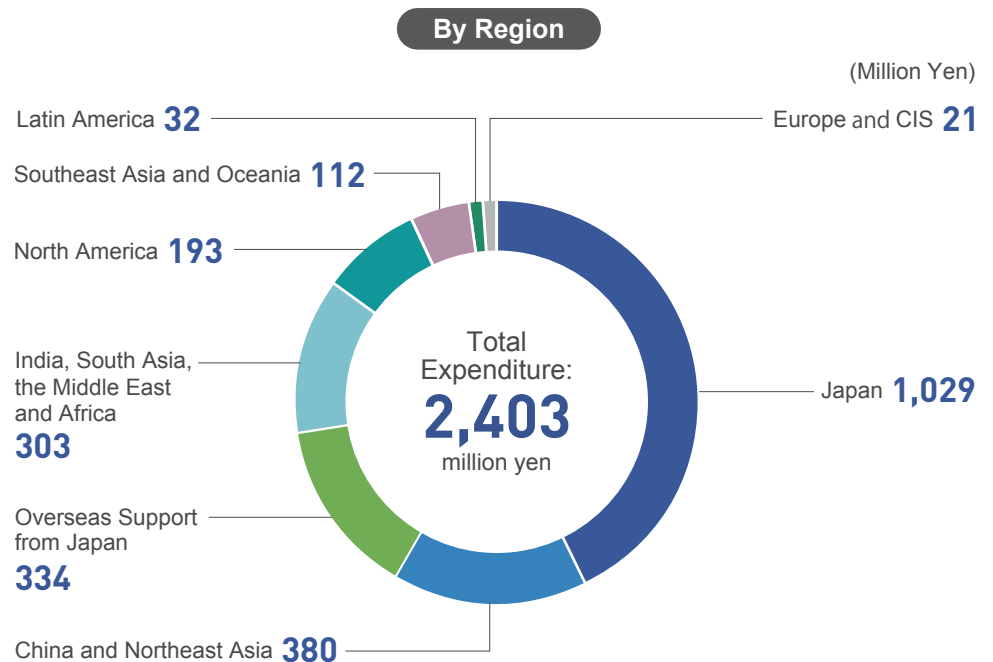
■ Panasonic China

Awarded the CSR China TOP 100 Rank & SDGs Special Awards at the CSR China Education Awards

■ Panasonic Energy Wuxi

Awarded the Environmental Contribution Award for its Environmental Conservation Program by the Wuxi Municipal Bureau of Ecology and Environment

Spending on Corporate Citizenship Activities in Fiscal 2025 (April 1, 2024 - March 31, 2025)



Social Data: Corporate citizenship activities data, page 140

Social Data

Personnel data

Category	Target	Record date	Classification	Units	2023	2024	2025	
Employees	Global consolidated	31-Mar	Total	People	233,391	228,420	207,548	
			By region	Japan	36	38	41	
				Southeast Asia & Pacific	19	16	17	
				China & Northeast Asia	18	17	16	
				North America	13	15	12	
				Europe & CIS	8	8	7	
				India, South Asia, Middle East & Africa	5	5	5	
				Latin America	1	1	2	
			Job type	Indirect	%	59	60	62
				Direct manufacturing	%	41	40	38
	Japan (PHD, PEX, and operating companies ¹⁾)	Total	1-Apr	Total	People	64,159	65,808	60,565
				Gender	Male	People	51,057	52,091
		%				79.6	79.2	78.1
		Female			People	13,102	13,717	13,293
					%	20.4	20.8	21.9
		Employment type		New graduates	People	49,706	49,652	44,843
					%	77.5	75.4	74.0
				Mid-career hires	People	14,453	16,156	15,722
					%	22.5	24.6	26.0
		Nationality		Japan	People	63,565	65,105	59,832
%					99.1	98.9	98.8	
Non-Japanese citizens		People		594	703	733		
		%		0.9	1.1	1.2		
Employment status		Permanent employment		People	59,480	59,905	54,613	
				%	92.7	91.0	90.2	
		Fixed-term employment		People	4,679	5,903	5,952	
				%	7.3	9.0	9.8	
Age group		Up to 29 years old		People	8,091	9,063	8,997	
	%		12.6	13.8	14.9			
	30-39	People	9,395	10,248	9,904			
		%	14.6	15.6	16.4			
	40-49	People	14,900	13,886	12,168			
		%	23.2	21.1	20.1			
50-59	People	27,332	26,988	23,875				
	%	42.6	41.0	39.3				
60 years old or older	People	4,441	5,623	5,621				
	%	6.9	8.5	9.3				
Average years of service	Japan (PHD, PEX, and operating companies) (Permanent employees)	1-Apr	Total	Years	22	20	20	
			Gender	Male	22	21	20	
				Female	20	19	19	

Data on diversity and work styles

Category	Target	Record date	Classification	Units	2023	2024	2025		
Management team diversity	PHD executive officers	April 1	Total	People	14	12	13		
				Female	People	3	3	5	
				Mid-career hires	People	4	3	5	
				Non-Japanese citizens	People	1	1	2	
				Diversity (excluding overlapping attributes)	People	5	4	7	
			%	36	33	54			
Managerial diversity	Japan (PHD, PEX, and operating companies) (Non-fixed-term employees)	April 1	Total	People	13,084	13,547	12,346		
				Gender	Male	People	12,285	12,593	11,366
						%	93.9	92.4	92.1
				Female	People	799	954	980	
					%	6.1	7.0	7.9	
				Employment type	New graduates	People	10,832	10,941	9,640
						%	82.8	80.8	78.1
				Mid-career hires	People	2,252	2,606	2,625	
					%	17.2	19.2	21.3	
				Nationality	Japan	People	12,993	13,458	12,251
%	99.3	99.3	99.2						
Non-Japanese citizens	People	91	89	95					
	%	0.7	0.7	0.8					
Employed people with disabilities	Japan (PHD, PEX, and operating companies)	June 1	Total	%	2.45	2.56	2.53		
Working hours	Japan (PHD, PEX, and operating companies)	April 1	Target individuals	People	64,159	63,218	60,565		
				People	962	866	860		
				%	1.5	1.4	1.4		
				Flexible working hours ³	People	54,009	51,146	51,976	
				%	84.0	80.9	85.8		
Remote work ⁴	People	11,882	9,171	12,064					
%	19.0	14.5	19.9						
Category	Target	Record date	Classification	Units	Fiscal2023	Fiscal2024	Fiscal2025		
Gender wage gap ⁵	Japan (PHD, PEX, and operating companies)	April 1-March 31 of the following year	All employees (ratio of female average to male average)	%	72.6	75.3	74.9		
			Managerial positions (ratio of female average to male average)	%	93.4	95.8	91.9		
Childcare leave utilization	Japan (PHD, PEX, and operating companies)	April 1-March 31 of the following year	Male	Qualified male	People	1,108	1,118	1,053	
				Male who took leave	People	718	850	894	
				Male utilization rate	%	64	76	84	
				Leave days taken by male	Days	21.5	36.2	45.2	
			Female	Qualified female	People	237	250	257	
				Female who took leave	People	237	241	249	
				Female utilization rate	%	100	103	96	
				Leave days taken by female	Days	376.4	305.8	277.5	
Annual paid leave days taken and utilization rate	Japan (PHD, PEX, and operating companies)	April 1-March 31 of the following year	Leave days granted per year	Days	25	25	25		
			Average leave days taken	Days	20	18	19		
			Average utilization rate	%	78.4	70.4	77.5		
Work styles	Japan (PHD, PEX, and operating companies)	April 1-March 31 of the following year	Selective four-day workweek	People	—	153	138		
			Remote work outside commuting distance	People	—	259	202		
			Side Jobs	People	—	258	454		
			Contract work	People	—	225	404		
			Employed by another company	People	—	33	50		

Career and human resources development data

Category	Target	Record date	Classification		Units	Fiscal 2023	Fiscal 2024	Fiscal 2025
Employee Opinion Survey	Global consolidated	Conducted annually every Q3	Respondents		People	149,000	157,000	152,000
			Unlock indicators	Global		—	—	43
				Japan		—	—	32
			Employee engagement	Global	%	67	68	68
			Employee enablement	Global		65	66	66
Recruitment	Japan (PHD, PEX, and operating companies)	April 1–March 31 of the following year	Total		People	2,597	3,692	3,175
			Gender		People	2,001	2,853	2,365
			Male		%	77.1	77.3	74.5
					People	596	839	810
			Female		%	22.9	22.7	25.5
					People	2,441	3,537	2,922
			Employment status		People	1,908	2,755	2,187
			Male		%	78.2	77.9	74.8
					People	533	782	735
			Female		%	21.8	22.1	25.2
					People	156	155	253
			Total fixed-term employees		People	93	98	178
			Male		%	59.6	63.2	70.4
					People	63	57	75
			Female		%	40.4	36.8	29.6
					People	—	1,355	1,546
			Employment type		People	—	985	1,117
			Male		%	—	72.7	72.3
					People	—	370	429
			Female		%	—	27.3	27.7
	People	—		2,337	1,629			
Total mid-career hires		People	—	1,868	1,248			
Male		%	—	79.9	76.6			
		People	—	469	381			
Female		%	—	20.1	23.4			
		People	—	—	—			
Turnover ⁶	Japan (PHD, PEX, and operating companies)	April 1–March 31 of the following year	Total		%	3.6	3.4	3.3
			For reasons other than mandatory retirement		%	2.2	1.5	1.6
			New graduates		%	—	—	3.2
			For reasons other than mandatory retirement		%	—	—	1.4
			Mid-career hires		%	—	—	3.8
			For reasons other than mandatory retirement		%	—	—	2.1
			Open recruitment results		Number	3,526	2,710	3,211
			Transfer results		Number	1,256	1,278	1,420
Internal open recruitment	Japan (PHD, PEX, and operating companies)	April 1–March 31 of the following year	Multiple Internal Roles (transfer results)			38	46	33
			Participation rate		%	82.8	83.0	82.3
One-on-one	Japan (PHD, PEX, and operating companies)	Every December	Satisfaction rate		%	83.9	83.5	84.6
			Total Groupwide training hours		Hours	—	2,160,311	2,220,805
Training results	Japan (PHD, PEX, and operating companies)	April 1–March 31 of the following year	Training hours per person		Hours	—	35.6	38.7
			Total		People	115	129	125
Progress in preparing successors ⁷	Japan (PHD, PEX, and operating companies)	March 31	Appointment possible immediately		People	19	25	24
			Appointment possible within five years		People	36	34	35
			Appointment possible within ten years		People	60	70	66
					People	60	70	66

*1 Eight companies were targeted in 2025: Panasonic Holdings (PHD), Panasonic Corporation, Panasonic Entertainment & Communication, Panasonic Housing Solutions, Panasonic Connect, Panasonic Industry, Panasonic Energy, and Panasonic Operational Excellence (PEX). In 2024 and before, Panasonic Automotive Systems was also included in this list.

*2 The system's internal name is the Work and Life Support Program.

*3 Figures include managerial positions from fiscal 2024 onward.

*4 Employees who work from home for more than half of the days in a month

*5 Female wages as a percentage of male wages (with male wages set at 100%)

*6 Turnover rate is the number of annual resignations divided by the average number of employees per year (excluding re-employment after retirement and appointment to executive positions)

*7 Percentage of successors ready for appointment immediately, within five years, or within ten years for the positions of president in operating companies/division companies, or PHD executive officer

Other human resources systems and measures

◇ Examples of training programs related to successor development

Name	Target	Details
Launching Executive Leaders	Successors for executive management positions	This program is for executive candidates who are expected to be promoted to business unit managers or affiliate company presidents within one to two years. The goal is to help participants gain the ability to lead organizations effectively through adverse situations by considering the importance of communicating a fact-based vision and management that brings out the best in people, while linking what they learn to practical application and establishing their own unwavering management philosophy.
Creating Executive Leaders		This program is for executive candidates who are expected to be promoted to department managers or overseas company executive posts within one to two years. This self-improvement program fosters the insight and skills required for business management and the determination to want to become a member of a management team, providing candidates with the perspective, knowledge, management literacy, and determination necessary.
Management Literacy Training		This program is for young executive candidates who are expected to be promoted to section managers or gain experience working overseas within one to two years. This program aims to provide opportunities to learn basic MBA skills (people, materials, and money) and practical management skills (e.g., SCM, design thinking) and to think about management as a whole.

◇ Examples of initiatives related to career development and asset formation support

Name	Target	Details
A Better Dialogue (dialogue between an employee and their supervisor)	Japan (PHD, PEX, operating companies, and some affiliate companies)	This groupwide initiative supports individuals in their growth and overcoming challenges. Together with one-on-one meetings designed to elicit the thoughts and feelings of each individual, A Better Dialogue aims to improve the quality and quantity of dialogue between employees and their supervisors. It consists of three frameworks: career and skills development, goal management, and behavioral reflection using PLP.
Internal open recruitment		□ e-Challenge: A program that allows employees to apply for open positions and transfer if they are accepted. Individuals apply at their own discretion for job postings published by business units.
		□ e-Appeal Challenge: A program that allows employees to promote themselves to their desired departments. Employees promote their strengths to their desired department and, if selected, gain the opportunity to take on new challenges.
Career and Life Design Seminars	□ Multiple Internal Roles: A program where employees can apply for open positions and, if selected, take on additional responsibilities within the group while remaining in their current department. It promotes self-growth by testing employee's abilities and potential.	We hold these seminars to nurture individuals who continue to take on challenges and support self-directed and diverse career development both within and outside the Group. They promote understanding the importance of self-directed career development, encourage behavioral changes toward realizing a career vision, and offer support for preparing a fulfilling life plan. These seminars are for employees in target age groups, with 4,768 participants in fiscal 2025.
	Middle management training	This training is for section managers, who are expected to demonstrate transformational leadership by setting their organization's direction and fostering an organizational culture in which each individual is highly motivated in their work. There were 4,213 participants in fiscal 2025.
Employee stock purchase program (Panasonic Group Employee Shareholding Association)		We run this program to encourage employees to commit to company performance through the acquisition of Panasonic shares and help them build wealth. It promotes employee shareholding through a monthly installment-based purchase plan as one of the many incentives we offer.

Occupational health and safety data

Category	Target	Record date	Classification	Units	Fiscal 2023	Fiscal 2024	Fiscal 2025 ¹⁰	
Targets (fatal, serious, and major accidents)	Global consolidated	April 1–March 31 of the following year		Number	0	0	0	
Serious accidents ⁸	Global consolidated	April 1–March 31 of the following year	Total		11	2	7	
			By region		Japan	3	0	0
			Outside Japan		8	2	7	
Of which fatal accidents ^{8, 9}	Global consolidated	April 1–March 31 of the following year	By region		Japan	0	0	0
			Outside Japan		0	0	3	
			Total		1	0	0	
Major accidents ⁸	Global consolidated	April 1–March 31 of the following year	Total		0	0	0	
			By region		Japan	0	0	0
			Outside Japan		1	0	0	
Accidents leading to lost work ⁸	Global consolidated	April 1–March 31 of the following year	Total		134	150	123	
			By region		Japan	56	70	69
			Outside Japan		78	80	54	

Category	Target	Record date	Classification	Units	2022	2023	2024 ¹⁰
Lost-time injury frequency rate ¹¹	Japan	January 1–December 31	Electronic machines and devices manufacturing	—	0.53	0.54	0.54
			Panasonic Group		0.13	0.24	0.23 (Including contractor's employees: 0.30)
			PHD, PEX, and operating companies		0.08	0.23	0.18 (Including contractor's employees: 0.26)
Severity rate ¹²	Japan	January 1–December 31	Electronic machines and devices manufacturing	—	0.02	0.01	0.01
			Panasonic Group		0.003	0.005	0.005 (Including contractor's employees: 0.004)
			PHD, PEX, and operating companies		0.002	0.004	0.002 (Including contractor's employees: 0.007)

Category	Target	Record date	Classification	Units	Fiscal 2023	Fiscal 2024	Fiscal 2025
Health checkup utilization rates	Japan ¹³	April 1–March 31 of the following year		%	93.4	97.1	97.2
Stress check utilization rates	Japan ¹³	April 1–March 31 of the following year			92.0	92.6	92.9
Proper lifestyle habits indicators	Japan ¹³	April 1–March 31 of the following year	Moderate drinking ¹⁴	%	92.5	92.5	88.9
			No smoking		78.2	78.7	79.1
			Adequate sleep		60.7	59.3	58.0
			Proper diet		46.3	46.2	45.6
			Adequate exercise		32.2	33.8	35.2
Health indicators	Japan ¹³	April 1–March 31 of the following year	Rate of awareness of steps taken per week	%	59.6	58.0	59.8
			Rate of exercise		24.4	24.8	25.9
			Smoking rate		21.9	21.3	21.0
			Obesity rate		29.0	28.7	29.4

⁸ A "serious accident" is a fatal accident or an accident resulting in long-lasting physical disabilities. A "major accident" involves at least three employees. The data includes those of external contractors and contractor's employees.

⁹ Three cases of fatal accidents in Fiscal 2025 involved two employees and a contractor's employee

¹⁰ Excludes Panasonic Automotive Systems, Co., Ltd.

¹¹ Disabling injury frequency rate: The number of accidents that require time off from work per one million total working hours. The data for Panasonic Group, PHD, PEX, and operating companies include external contractors.

¹² Severity rate: Proportion of time lost per 1,000 total working hours. The data for Panasonic Group, PHD, PEX, and operating companies. The data includes those of external contractors.

¹³ Panasonic Group companies in Japan (Figures in Fiscal 2025 include Panasonic Automotive Systems, Co., Ltd.).

¹⁴ Questions in medical interview changed in Fiscal 2025.

Category	Target	Record date	Classification			Units	Fiscal 2025 ¹⁵
			Organizer	Target employees	Course name		
Personal health & safety training (Safety-focused)	Japan (Panasonic Group (including affiliate companies))	April 1–March 31 of the following year	Total			People	1,026
			Health and Safety Management Office	Occupational health and safety staff (within three years of appointment)	Occupational Health and Safety Staff Training (Introduction)		28
				For section and higher level managers (when newly appointed)	Occupational Health and Safety Seminar for HR Personnel		24
			HR Function Planning Office	Regularly hired employees in their second year/employees changing their career/mid-career hires for HR	HR Knowledge Training		52
			Monozukuri Training Center	Plant managers, manufacturing managers, and other relevant personnel	Occupational Health and Safety Seminar for Executives and Plant Managers		39
				Chemical engineering managers and other relevant personnel	Chemical Substance Management Training		250
				Manufacturing, production process, and quality assurance employees	Lectures on Creating and Using Equipment Safety Standards (C Training)		20
			Health & Safety Management Office in Panasonic Electric Works Business Consulting & Training Co., Ltd.	Production technology, equipment safety, and health and safety	Equipment Safety Engineer Training (A Training)		264
				Production technology, equipment safety, health and safety, manufacturing line leaders	Equipment Safety Manager Training (B Training)		349
			Personal health & safety training (General training that includes safety)	Japan (Panasonic Group (including affiliate companies))	April 1–March 31 of the following year		Total
Team & Talent Development Center (T2DC)	New spring graduates	Introductory Training for New Spring Graduates				1,745	
	Employees assigned to overseas manufacturing companies	Pre-Assignment Training for Overseas Manufacturing Companies				151	

¹⁵ Includes Panasonic Automotive Systems.

Corporate citizenship activities data

Category	Target	Record date	Classification	Units	Fiscal 2023	Fiscal 2024	Fiscal 2025
Corporate citizenship activity expenses	Global consolidated	April 1–March 31 of the following year	Total expenditures	Millions of yen	2,065	2,353	2,403
			Activity expenses by region	Millions of yen	1,060	1,143	1,029
				Japan	417	381	380
				China & Northeast Asia	348	317	334
				Overseas Support from Japan	4	13	303
				North America	167	237	193
				Southeast Asia & Pacific	21	213	112
				Latin America	5	1	32
				Europe & CIS	43	49	21
			Breakdown by field	Social welfare	6.1	11.8	24.2
				Human development support	27.5	26.1	23.8
				Operating expenses	13.9	13.0	13.6
				Local communities	9.3	8.6	10.5
				Academic research	4.9	3.7	7.6
				Arts and culture	7.8	8.4	6.6
				Sports	4.8	5.5	6.3
				Environment	4.5	7.8	2.7
				Disaster relief	9.1	4.1	2.5
				Publicity	4.3	2.2	1.8
			Preservation of temples, shrines, and historic sites	0.4	0.4	0.4	
International exchanges	0.3	0.6	0.1				
Support for NPOs/NGOs ¹⁶	2.6	2.5	N/A				
Support for areas without electricity ¹⁶	2.4	2.2	N/A				
Support for economic organizations ¹⁶	2.0	1.8	N/A				
Health and medicine ¹⁶	0.2	1.2	N/A				

¹⁶ Support for areas without electricity and health and medicine will be included in social welfare from fiscal 2025 onwards. Support for NPOs/NGOs will be allocated to social welfare or local communities depending on the type of support, while support for economic organizations will be allocated to local communities, academic research, or other areas depending on the type of support.

Risk Management

Panasonic's founder, Konosuke Matsushita, coined numerous aphorisms which are still used at the company: "Hardship now, pleasure later," "There are signs before all things," and "Small things can create big problems; one must be alert to signs of change and act accordingly," among many others. Inheriting these ideas as the cornerstone of our thinking, we, as Panasonic Group, conduct Groupwide risk management activities.

Moreover, based on the principle of "Thinking from a Global perspective, work for the whole world," we began our export business, technical assistance to overseas countries, and construction of overseas factories in 1961. At the same time, while confronting the risks that sometimes arose, we have promoted risk and crisis management initiatives early, including overseas safety policies and emergency response plans.

Policy

The Group has a wide range of businesses, including Lifestyle, Connect, Industry, and Energy Segments, and faces a variety of risks that could affect each of these business activities. We aim to enhance the competitiveness of each business in its respective market and achieve sustainable and stable growth for the entire Group by promoting appropriate countermeasures and risk-taking that may affect the achievement of our business objectives.



Panasonic Group values a Risk Culture in terms of its organizational awareness and behavior toward risk, aiming to enhance its risk management effectiveness (see "Education and Awareness" below). We aim to build on this cultural orientation to ensure that we adequately incorporate responses to changes in the business environment into our strategies and operations.

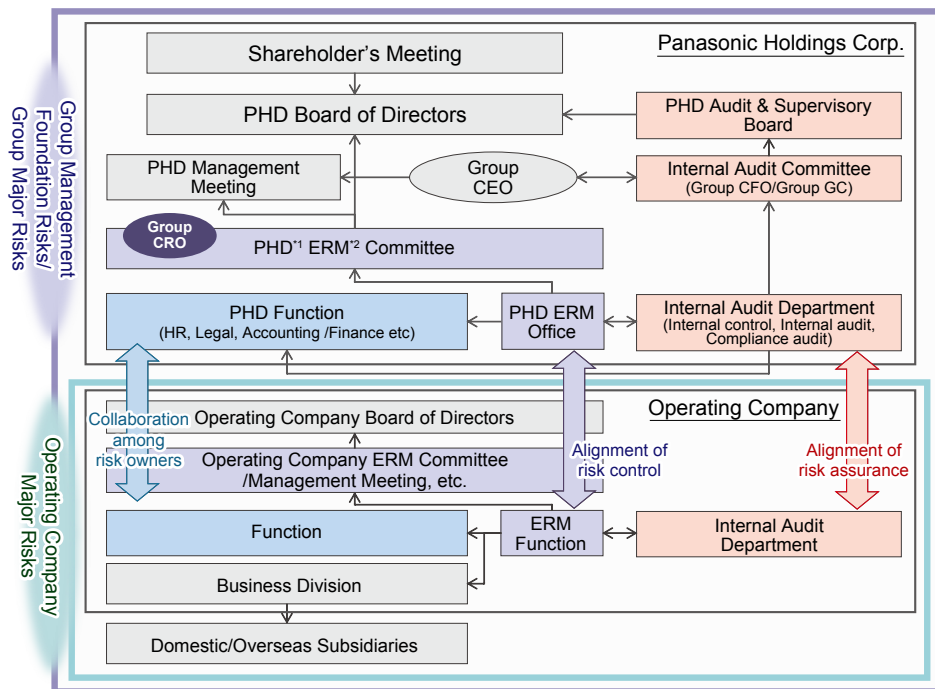
Responsible Executive and Framework

The Group has established a Groupwide risk management system and processes based on the "Panasonic Group Basic Rules for Risk Management" (the "Basic Rules"), which comply with ISO 31000, an international standard for risk management systems, and COSO-ERM (2017), an international framework for risk management.

The Group Chief Risk Management Officer (Group CRO) is responsible for promoting risk management throughout the Group. Moreover, the Enterprise Risk Management Office at Panasonic Holdings Corporation ("PHD ERM Office"), a dedicated risk management department, manages the practical operations of the Group's risk management processes.

We have also established the PHD Enterprise Risk Management Committee (the "PHD ERM Committee"), which holds regular meetings chaired by the Group CRO and comprising the heads of PHD Legal, Human Resources, Accounting, and other functional departments. The PHD ERM Committee focuses on risks that could have a significant impact on the Group's management. It monitors changes in risks and countermeasures, and confirms the risks are effectively controlled. If necessary, it issues directives on revisions or stricter implementation of countermeasures.

Risk Management Framework



¹ PHD: Panasonic Holdings Corp. ² ERM: Enterprise Risk Management

Basic Framework

The Group defines risk scenarios for the purpose of risk management, based on their respective scope and time horizon. Any uncertain events that could result in “Loss” or “Threat” to the execution of short-term business plans and daily operations are defined as “Operational Risks”, and while uncertain events that could result in “Opportunities” or “Threats” to be considered in execution of medium- to long-term business objectives are defined as “Strategic Risks”. The PHD ERM Office annually identifies risks that could impact the entire Group considering in the external and internal environmental changes, as well as management’s risk awareness.

Among the identified risks, Operational Risks are assessed by the relevant functional departments based on their likelihood of occurrence and the associated financial and non-financial impacts. The PHD ERM Committee determines “Group Management Foundation Risks” and “Group Major Risks” from the perspective of the Group’s management and social responsibilities, and the relevant functional departments take any necessary countermeasures. For Strategic Risks, in view of promoting appropriate risk-taking aligned with the Group’s risk tolerance, the relevant functional departments identify and evaluate events that could result in

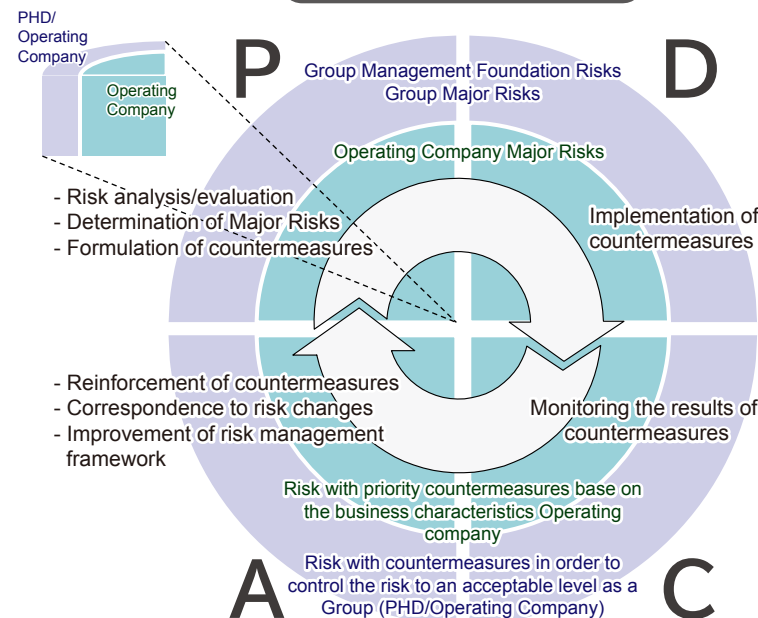
“Opportunities” or “Threats” or both, based on key agenda scenarios positioned as “PHD Major Strategic Risks”.

Among events, those with low uncertainty are immediately subject to countermeasures. For other events, leading indicators established to detect early signs of occurrence, allowing for the consideration of countermeasures in response to changes in uncertainty. The PHD ERM Office monitors changes in risks and the progress of countermeasures to confirm the effectiveness of risk control efforts.

The PHD ERM Committee regularly reports on material risks and the progress of countermeasures to the Group Management Meeting and the Board of Directors. Each Operating Company under the jurisdiction of PHD has also established an “Operating Company ERM Committees” to promote risk management activities focusing on important risks for each company and in their respective business areas. The Internal Auditor conducts risk-based approach audits focusing on critical risks.

In recent years, in light of the growing importance of corporate social responsibility (CSR), SDGs, ESG, and other social expectations, we have incorporated into our activity framework items related to risks arising from failure to meet these expectations (including human rights and labor compliance or environmental issues) and evaluation factors related to the Group’s social impact (e.g., our reputation).

Risk Management Process



Group Major Risks in Fiscal 2026

* Group Management Foundation Risks: Risks expected to be of high importance to the Group's management and business foundations

Risk factors	Risk scenarios	Key initiatives (references)
Disasters & accidents*	<ul style="list-style-type: none"> Earthquakes, tsunamis, floods, and other natural disasters or workplace fires and other industrial accidents result in harm to employees, facilities, materials, and finished products due to inadequate countermeasures, firefighting delays, or impacts exceeding reasonable expectations, leading to suspended operations, production or shipment delays, and repair costs. 	—
Compliance*	<ul style="list-style-type: none"> Serious compliance violations (e.g., violations of antitrust or competition laws, bribery or corruption) or other compliance issues may arise, resulting in administrative penalties (e.g., fines), criminal penalties, or civil litigation for damages. They may also harm the Group's reputation. 	"Compliance" Sustainability website Sustainability Data Book 2025, page 145-
Information security & cybersecurity*	<ul style="list-style-type: none"> Trade secrets (e.g., technical information), customer privacy, or credit-related information may leak due to intentional acts (e.g., cyberattacks) or negligence by employees or business partners, resulting in a decline in social trust and liability for damages. 	"Cyber Security and Data Protection" Sustainability website Sustainability Data Book 2025, page 151-
	<ul style="list-style-type: none"> Information systems, production equipment, products, or services may become targets of cyberattacks, leading to business process disruptions, suspension of product or service provision, and liability for damages. 	
	<ul style="list-style-type: none"> Cybersecurity vulnerabilities discovered in products or services result in large-scale recalls, long-term suspension of provision, or significant countermeasure costs. Cybersecurity incidents occurring in the Supply Chain disrupt the procurement of raw materials or components, causing suspension or delay in the supply of the Group's products. 	
Quality*	<ul style="list-style-type: none"> Product defects result in quality issues (including dangerous accidents), and the resulting damages (including indirect damages) exceed the coverage provided by product liability insurance, resulting in significant compensation liabilities or response costs. It may also lead to a decline in the Group's image and reputation or the loss of customers. 	"Raising Product Quality Levels and Ensuring Product Safety" Sustainability website Sustainability Data Book 2025, page 116-
Terrorism, war, civil unrest & political instability	<ul style="list-style-type: none"> Political instability, military tensions, terrorism, war, or other events occur in countries or regions where the Group or our Supply Chain has facilities, resulting in disruptions to business operations or situations threatening the lives of employees or stakeholders. 	—
Occupational accidents	<ul style="list-style-type: none"> Serious accidents occur due to inadequate workplace working conditions, work procedures, or inappropriate labor management, resulting in physical or mental harm to employees or stakeholders. 	"Maximizing the Potential of Diverse Talent and Organizations" Sustainability website Sustainability Data Book 2025, page 95-
	<ul style="list-style-type: none"> Violations of labor-related laws and regulations (such as the Labor Standards Act and the Industrial Safety and Health Act). result in criminal penalties, administrative penalties, or damage claims for failure to fulfill safety obligations. They may also harm the Group's reputation. 	
Human rights & labor compliance	<ul style="list-style-type: none"> The Group causes or becomes involved in, or is complicit in, human rights violations within the Group or its value chain, it may lead to the Group to be subjected to administrative penalties (such as fines), criminal penalties, or damage claims, which could harm our reputation. It could also lead to a decline in the Group's image and reputation, customers suspending transactions, or consumer boycotts. 	"Respect for Human Rights" Sustainability website Sustainability Data Book 2025, page 89-

PHD Major Strategic Risk in Fiscal 2026

Risk factors	Risk scenarios	Key initiatives (references)
Geopolitical & economic security	Threats <ul style="list-style-type: none"> Trade friction may trigger conflicts and market fragmentation between countries and regions, including the United States and China, and increase uncertainty regarding policies and regulations, such as trade and economic retaliatory measures accompanying changes in US administrations, which further strengthen trade restrictions, economic sanctions, and tariff barriers. As conflicts and the use of force between countries and within regions intensify, political and social turmoil caused by administrative changes and policy shifts in various countries may spread, fueling abrupt changes in the business environment. Specifically, the increase of additional tariffs based on policy and regulatory changes by the new government in the US, as well as the slowdown in EV sales due to abolishing mandatory requirements or reducing EV subsidies, may harm our automotive battery-related business. 	—
	Opportunities <ul style="list-style-type: none"> Utilize tax-related measures and subsidies based on each country's economic security policies. 	
Environmental issues & climate change	Threats <ul style="list-style-type: none"> Delays in environmental measures may result in lost business opportunities or suspended transactions in markets such as Europe. Increased energy procurement costs due to introducing carbon pricing (e.g., carbon taxes, emissions trading systems) and increased procurement and manufacturing costs due to the shift to materials with lower environmental impact. Increased production costs or production delays due to rising prices or supply shortages of recycled materials and reusable raw materials. Product demand declines below expectations, affected by the repeal or reduction of climate change-related laws and regulations, including the US Inflation Reduction Act (IRA). 	"Environment" Sustainability website Sustainability Data Book 2025, page 13-
	Opportunities <ul style="list-style-type: none"> Expanded opportunities for new technology and business development in response to environmental policies and regulations. Increased demand for environmentally friendly products and services driven by shifts in consumer awareness toward sustainable and ethical consumption. Development of new markets for high-efficiency solar cells and other products driven by the growing demand for renewable energy. Utilization of tax credits, subsidies, and other incentives based on energy security and climate change-related laws and regulations in various countries. 	
Attracting, acquiring & retaining human resources	Threats <ul style="list-style-type: none"> Efforts to secure talented personnel are not progressing, resulting in the departure of existing employees or the inability to acquire personnel necessary to promote management strategies. 	"Maximizing the Potential of Diverse Talent and Organizations" Sustainability website Sustainability Data Book 2025, page 95-
	Opportunities <ul style="list-style-type: none"> Increased opportunities to acquire and promote diverse talent, enhancing the competitive strength of the Group's businesses. 	
Effective utilization of artificial intelligence (AI)	Threats <ul style="list-style-type: none"> Failure to effectively utilize or develop AI as planned, resulting in lost business opportunities, or reduced competitive edge of products and services. Utilizing AI may cause privacy, security, fairness, copyright infringement, and other compliance issues, which could harm the Group's brand image and credibility. 	"AI Ethics" Sustainability website Sustainability Data Book 2025, page 121-
	Opportunities <ul style="list-style-type: none"> Improved productivity, generating new business ideas, and enhanced business competitiveness from utilizing AI. 	

Education & Awareness

The Group is promoting initiatives to foster a Risk Culture where each employee possesses appropriate risk literacy and is committed to sound risk-taking. Training programs for new employees and those preparing for overseas assignments (in the Japan region) is designed to help participants develop the mindset necessary to avoid excessive fear of risks and to turn them into opportunities for organizational and personal growth. The training also aims to equip participants with basic response skills in the event of a crisis.

As part of our corporate social responsibility, we conduct external lectures titled “Risk Management that Supports Organizational and Individual Growth” at universities to help develop the young people who will lead the future through risk management.



A lecture at a university

Reporting/Whistleblowing Mechanism (External and Internal)

The Group maintains a global hotline to allow domestic and overseas bases and business partners to report potential risks, including compliance violations, diverse types of harassment, and issues related to procurement activities. For more details, please see the “Compliance” chapter ([page 145-](#)).

BCM・BCP

The Group is committed to enhancing operational resilience through business continuity management (BCM) activities to ensure business continuity in the event of crises such as natural disasters, terrorism, war, pandemics, and cyberattacks.

We have established basic policies, organizational structures, roles, and initial response measures for emergencies that could significantly impact the entire Group, as outlined in the “Panasonic Group Emergency Response Rules”. We also conduct annual Group disaster drills and work to strengthen disaster prevention and mitigation measures in normal times, thereby bolstering the effectiveness of emergency response systems and coordination based on these regulations.

Moreover, we implement risk-based measures at the Group and in our Supply Chain based on hazard studies of natural disasters (e.g., earthquakes, floods, and tsunamis). We have also conducted impact analyses using the Nankai Trough Earthquake and the Tokyo Inland Earthquake as stress events with high likelihood, assuming these natural disasters will have a particularly severe impact on the Group’s business. We are improving measures deemed necessary based on the analysis results.

Finally, the Group is working to continuously enhance the entire Group’s resilience by deploying the Guidelines for Building Business Continuity Management (BCM). These guidelines outline the approach to identifying priority businesses for recovery in the event of an emergency and establishing business recovery processes. We also encourage each Operating Company and business site to formulate and appropriately revise their business continuity plans (BCPs).

Compliance

Materiality

As our business expands globally, directors and employees must always have accurate knowledge and high ethical standards to prevent intentional misconduct and crimes, as well as the various scandals that could arise due to insufficient knowledge or awareness on the part of those involved. Simultaneously, companies must clarify policies, establish regulations and systems, and conduct business activities under a sound corporate culture that remains cognizant of the risks found in the external environment, their businesses' nature, and local characteristics.

We must operate the Company properly and fulfill our responsibilities to our stakeholders, as we conduct business as a “public entity of society” with the management resources it has entrusted to us. We believe it essential that we do not violate laws and regulations or social norms. Moreover, we place great importance on always thinking about what is right for society and acting with integrity and fair play without indulging our self-interests. We believe that the unrelenting pursuit of such conduct will contribute to the authentic development of society, the industry, and our customers.

Conversely, if a compliance violation occurs during the Panasonic Group's conducting a wide range of businesses globally, the individual violator may be subject to criminal and disciplinary actions. The Group may also be subject to fines and administrative penalties, with the risk of receiving criminal and other sanctions. Furthermore, besides the economic losses, such violations may lead to reputational problems and harm the trust society and our stakeholders have in us.

With a full understanding of these positive and negative effects, we have established the Panasonic Group Code of Ethics & Compliance to embody our Basic Business Philosophy and practice compliance in our business activities. Moreover, we have established various internal rules and regulations to ensure compliance, including respecting fair and free competition and not engaging in bribery or corrupt practices with government officials or business partners. Moreover, we are implementing multiple initiatives to ensure that every single director and employee performs their duties with high ethical standards and appropriate knowledge.

Policy

We have established the Panasonic Group Code of Ethics & Compliance (the “Code of Ethics & Compliance”) to outline the commitments all Group companies and employees must fulfill while carrying out their business activities and embodying the Panasonic Group Basic Business Philosophy. It has been translated into 22 languages to ensure that it is understood by employees everywhere.

The Code of Ethics & Compliance explains the positive impact of implementing each of these commitments on society and our stakeholders in conjunction with the thinking behind our Basic Management Philosophy. It also clearly indicates what negative consequences may result for the Group and individuals for violating these commitments.

The Board of Directors of Panasonic Holdings Corporation (“PHD”) revises the established Code of Ethics & Compliance and informs all Panasonic Group companies of its updates. The Code then takes effect by resolution of each company's Board of Directors or other appropriate internal procedures.

[🔗 Panasonic Group Code of Ethics & Compliance](https://holdings.panasonic/global/corporate/about/code-of-conduct.html)

<https://holdings.panasonic/global/corporate/about/code-of-conduct.html>

Responsible Executive and Framework

Panasonic Group's General Counsel (GC), a Director and an Executive Officer, is responsible for group compliance (including anti-bribery and anti-corruption efforts) (as of August 2025). The Basic Rules for Group Compliance clarifies roles and responsibilities related to compliance in Panasonic Group, while the Basic Rules for Group Legal Affairs define the legal structure and functions.

Under the Group management system based on an operating company system, PHD is responsible for establishing a Groupwide compliance system, with the Group GC and PHD Legal Department playing critical roles under the Group CEO's supervision. Each operating company is responsible for establishing and implementing a compliance system for its business area based on the principles of Autonomous Responsibility Management, with the operating company CEO, Chief Legal Officer (CLO), and legal department mirroring their PHD counterparts' roles. Furthermore, for overseas Group companies, Panasonic Operational Excellence Co., Ltd. (PEX) assigns the CLOs and legal departments for each overseas office (formerly, regional headquarters). These officers and departments are responsible for ensuring compliance in their respective regions. Each CLO plays their role in the business and region under the Group GC, working as one legal team to ensure compliance.

Additionally, we have established a system whereby the Group GC and the CLOs of each company regularly report on compliance initiatives at meetings, such as the Board of Directors of PHD and each operating company, and receive appropriate supervision from these Boards.

The non-financial items in the evaluation indicators for the compensation of PHD executive officers and operating company presidents include the promotion of strict compliance.

Furthermore, starting in fiscal 2026, malus and clawback provisions*1 have been introduced in order to encourage PHD executive officers to take appropriate actions and to prevent, detect, and correct serious compliance issues (applicable to performance-based compensation).

*1 If a serious compliance issue arises (i.e., one that may materially affect the financial condition, reputation, or brand value of the entire Panasonic Group) or if the financial statements for the entire Panasonic Group need to be amended in any material respect, these provisions allow PHD to claim a refund of previously paid compensation (clawback provisions) or reduce the compensation to be paid (malus provisions).

Internal Communication and Training

Internal Communication

Panasonic Group fosters a compliance-first culture by regularly disseminating compliance-related messages from the Group CEO, each operating company's CEO, and all business site general managers.

Moreover, the CLOs and legal departments assigned to operating companies or to overseas companies by PEX, officers responsible for observance of the Code of Ethics & Compliance, export control officers, and the heads of functional departments implement specific compliance initiatives at each business site.

The Group's legal departments, which play a leading role in these efforts, have their legal staff from around the world attend the Global Legal & Compliance Meeting, and the CLOs from operating companies, PEX overseas offices, and the PHD Legal Division attend the Direct Report Meeting chaired by the Group GC. Through these and other meetings, the Group's legal departments learn about annual updates to the Group's compliance policies and work toward achieving compliance in various areas.

Furthermore, whenever a legal revision, government ordinance, or government directive is relevant to the Group's business, we notify and communicate it to the business site general managers, operating company CLOs, and relevant organizations. The Group also publishes a quarterly newsletter on compliance for managers ranked at or above the level of business division head.

Training

In response to changes in the business environment and the Group's business, we are bolstering our efforts to accurately identify changes in risk and signs of legal violations and misconduct in specific business fields, divisions, countries, and regions. Throughout the year, we will implement initiatives to establish a global awareness of ethical and legal compliance and improve our ability to respond to risk.

Panasonic provides training and awareness building for new hires and newly promoted

employees, through a variety of educational materials, including e-Learning, on the Code of Ethics & Compliance that all employees are required to follow, as well as on other compliance-related materials throughout the year. Recent examples include conducting training and obtaining certification from our officers and employees in Japan regarding Rules on Conflict of Interest.

Moreover, we are conducting education and awareness-raising efforts to ensure compliance with and implementation of the Code of Ethics & Compliance at all Group locations under the supervision of officers responsible for observance of the Code of Ethics & Compliance, who are appointed at all operating companies, business sites, and subsidiaries.

We also provide a field-specific compliance e-learning program on acts of bribery & corruption, and violations of competition laws which would significantly impact the Group should they occur. We are creating an environment in which directors and employees engaged in high-risk duties can regularly participate in the program, while managing the enrollment of those eligible by obtaining confirmation that participants understand the program's content.

Additionally, each operating company and PEX overseas office conducts compliance-related training for those who need it, according to the risks relevant to their businesses and regional characteristics.

Whistleblowing System

Panasonic Group has established a Global Hotline—a Groupwide integrated reporting mechanism that accepts reports which can be made anonymously from domestic and overseas sites and business partners or other external stakeholders, available in 32 languages, 24 hours a day, 365 days a year—to prevent misconduct and facilitate rapid resolutions to a wide range of compliance issues, including ethical issues, prevention of corruption, and harassment. The Code of Ethics & Compliance includes information on the Hotline along with the responsibility for reporting. We raise awareness of the system through various compliance training sessions and posters at domestic and overseas workplaces and business sites and post information to the Company intranet—including reporting statistics, case studies where reporting led to problem resolution, instructions on how to use the reporting system, flowcharts outlining the process from initial whistleblower report to final investigation report, FAQs on reporting, and appreciative feedback from whistleblowers—to ensure transparency on the reporting system's operations and encourage employees to use it. We also ask our business partners to inform their employees about our reporting system in our CSR Promotion Guidelines for Suppliers and promote their use of the system.

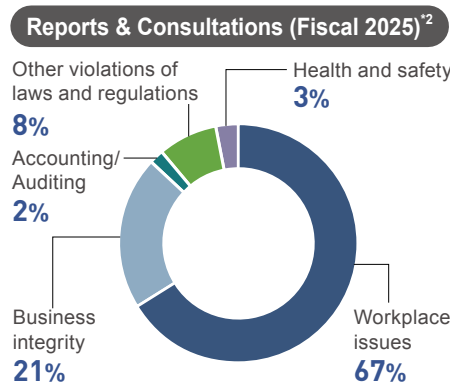
The Global Hotline website clearly states the necessary procedures for reporting issues, how personal data and other information collected is managed, and where responsibility lies. The

website additionally allows whistleblowers to check the progress of each case at any time using a reporting key and password assigned to their submission.

Moreover, employees have other methods for reporting or making grievances. We have an Equal Partnership Consultation Office in Japan that provides consultation on fair treatment in the workplace, sexual harassment, and power harassment, as well as an Auditor Reporting System for assessing the legality of duty execution and investigating fraud perpetrated by directors and executive officers. Establishing the above hotlines and contact points does not preclude employees from using other reporting and grievance mechanisms.

The Code of Ethics & Compliance stipulates that “Panasonic does not tolerate any retaliation or other action that discriminates against or disadvantages anyone who acts in good faith to raise a compliance concern.” Retaliation against whistleblowers is strictly forbidden, and their confidentiality is assured through anonymous reporting. To clarify our stance, Panasonic Group has adopted Rules on the Prohibition of Retaliatory Behavior Against Whistleblowers and Others. The Rules prohibit retaliation against internal/external whistleblowers, employees, those participating in investigations, and investigation teams, ensuring proper operations in our whistleblowing systems.

In addition, we have established systems for Groupwide reporting and investigations, including the Internal Reporting and Investigation Rules—which stipulate and administer a system for compliance issue reporting and notification—as well as the frameworks necessary for appropriately receiving, investigating, addressing, and reporting such issues to management. These regulations clearly define the types of cases that are subject to internal reporting and the methods of investigation. According to the provisions, each operating company has clearly designated responsible departments and managers in charge of internal reporting, primarily from the legal and human resources functions. We immediately conduct internal investigations when potential violations are identified through hotline reporting, audits, and the like. If these internal investigations conclude that illegal activities have taken place, Panasonic immediately addresses the violations while analyzing their root causes, implementing measures to prevent recurrences, and taking disciplinary actions against relevant parties as necessary.



^{*2} The definition of “Workplace issues” includes harassment, sexual harassment, bullying, discrimination, unfair treatment, complaints, and others. The definition of “Business integrity” includes bribery, conflicts of interest or receiving any improper benefits, fraud and theft, competition law and antitrust, product quality, data privacy and information security, and others. The figures in the graph are rounded to the nearest whole number.

Furthermore, we continue to conduct training programs for employees investigating reports across the Group to raise and standardize their investigative capabilities.

In fiscal 2025, we received approximately 1,480 reports and consultations, with approximately 85% of these coming through the aforementioned global hotline. Approximately 67% of all reports were related to various workplace issues (see graph on the left). Of the reports and consultations received, approximately 32% were substantiated. Furthermore, all reports and consultations we receive are investigated in cooperation with the relevant departments in accordance with internal rules, and we address issues, prevent recurrence, handle confirmed cases as necessary, and we notify whistleblowers of this fact (the period covered by these statistics is from March 16, 2024, to March 15, 2025).

🔗 Global Hotline EARS

<https://secure.ethicspoint.eu/domain/media/en/gui/104773/index.html>

We will continue to review the reporting system in a manner that is appropriate to the internal and external environment and relevant issues.

Performance Evaluation

The Group has identified business integrity as a material issue and is working toward the goal of zero serious compliance violations (see [page 6](#)).

The PHD Legal Division checks the status of compliance with and implementation of the Code of Ethics & Compliance annually, including appointing an officer responsible for observance of the Code at each Group company, providing education and training on the Code, and obtaining written pledges of compliance with the Code. The results of these checks are subject to external audits by an auditing firm as part of the Group’s control audits, thereby confirming their effectiveness on a regular basis. We are also improving our monitoring to ensure that the whistleblowing system operates appropriately.

Additionally, we conduct an Employee Awareness Survey targeting all employees worldwide, asking questions on compliance awareness and its reach within our corporate culture. We measure these metrics over time across the entire Group, regions, and organizations, using the results to improve compliance culture within each organization. We received responses from approximately 150,000 employees in fiscal 2025.

■ Serious Violations and Corrective Measures

If Panasonic becomes aware of any serious violation of laws or corporate regulations, we will cease the violation immediately and, after sufficiently investigating facts and causes, consider countermeasures. We report on such matters to the Board of Directors as necessary and consider countermeasures of the violation swiftly and across the entire Group.

On January 12, 2024, it was discovered that Panasonic Industries Co., Ltd. (“PID”) had engaged in multiple irregularities in the process of the certification by UL Solutions (“UL”), a third-party safety science organization in the US, for electronic materials manufactured and sold by PID. In response to this, PID established an external investigation committee composed of external experts and conducted investigations into the irregularities in the process of certification by UL and other quality irregularities. On November 1, 2024, PID published the investigation report it received from the external investigation committee and the measures it formulated to prevent recurrence.

Refer to the link below for more details.

🔗 **Investigation Report from the external investigation committee (Summary Version)**

https://www.panasonic.com/content/dam/panasonic/global-en/industry/info/20241101/report_jp_summary_en_241031.pdf

🔗 **PID “Results of Investigation of Irregularities in Panasonic Industry’s Product Quality and Measures to Prevent Reoccurrence”**

https://www.panasonic.com/content/dam/panasonic/global-en/industry/info/20241101/investigation_result_and_measures_to_prevent_reoccurrence_en.pdf

Moreover, the entire Panasonic Group, with support from an external law firm, has conducted thorough self-assessments targeting inappropriate actions related to quality compliance since fiscal 2024, aiming to resolve all quality compliance-related issues and eradicate quality fraud.

Initiatives to Address Significant Compliance Risks

■ Preventing Cartels

Panasonic Group takes extremely seriously the fact that our company has been implicated in multiple international cartel incidents. We are working to prevent any further association with cartelization activities. We take thorough and detailed care to prevent any such involvement, as it would have a variety of negative impacts on our business. If Panasonic were to become involved in the creation of a cartel, we would not only lose the trust of our customers but also be required to pay huge amounts of penalties and compensation for damages, and we could lose our designation in public procurement.

In fiscal 2025, the enforcement authorities took no legal action against the Group for anti-competitive behavior. We will continue to pursue thorough anti-cartel efforts.

Basic Policies

We have established the following basic policies to prevent cartels, collusive bidding, and other such violations:

- Contact with competitors is allowed only in cases in which it is absolutely necessary, and it is subject to prior approval.

- Agreements and exchanges of information with competitors regarding prices, quantities, and other competition-related matters are strictly prohibited.
- Anyone who encounters behaviors that may give rise to suspicions of cartels must make an objection, leave the room, and file an internal report.
- We have established a whistleblowing system and an internal leniency system to improve our ability to self-regulate and conduct appropriate monitoring based on risk assessment, thereby maintaining an effective anti-cartel system.

Fair Competition Compliance Policy

The Group has established and implemented the Rules Concerning Activity and Relationship with Competitors in 2008 to prevent actual and suspected cartel and bid rigging activities. However, in light of the trends in how authorities handle competitiveness in various countries, we revised these rules as the Fair Competition Compliance Policy in January 2025 and have been applying them to all Group employees since April 2025. These rules include items such as the following:

- The basic principle that we must not engage in anticompetitive conduct, such as cartels and bid-rigging, resale price maintenance, abuse of a dominant market position or other unfair trade practices.
- Definition of prohibited information exchanges and agreements with competitors not only in markets related to product sales, production, development, and research, but also in material procurement and labor markets. It also requires prior approval before initiating contact with any competitor.
- Specification of the matters regarding periodic education and auditing, etc. to ensure compliance with the Policy
- Obligations to report any suspected violations of the Policy and dawn raids or any other investigations by law enforcement authorities
- Internal leniency system for cartels and bid rigging

■ Preventing Bribery and Corruption

Basic Policy

In addition to preventing the bribery of government officials, Panasonic Group has prohibited offering benefits of any kind—regardless of whether they occur as entertainment, gifts, or in any other form—or receiving any personal benefits in any situation in which these would be in violation of laws or social ethics. To strengthen the global prevention of bribery and corruption, on July 1, 2019, Panasonic adopted the following four global regulations that now apply to all Panasonic Group employees and executives.

In the past three years, there were no cases of sanctions by the authorities for bribery or corruption.

Regulations

◇ Global Anti-Bribery / Anti-Corruption Policy

Adopted to effectively prevent, discover, investigate, and correct acts of actual corruption or acts deemed to be corrupt with regard to the bribery of government officials and corruption related to business partners.

Specifically, the Policy defines and prohibits facilitation payments and acts considered to be bribery or corruption in connection with political contributions, donations, or sponsorships; lobbying; hiring and recruitment; and mergers, acquisitions, and joint ventures. It also specifies the procedures for preventing bribery and corruption, including due diligence and terms and conditions that require approval by legal officers, and stipulates the maintenance and retention of accurate expenditure records at least for a period of five years.

◇ Rules on Third-Party Intermediary Risk Management for Anti-Bribery / Anti-Corruption

These rules are designed to prevent, detect, investigate, and remediate acts of bribery or corruption involving third parties, including sales intermediaries and administrative service providers. They stipulate the compliance requirements and procedures for assessing, reviewing, and monitoring risks and risk mitigation measures for these business partners.

◇ Rules on Gift and Hospitality for Anti-Bribery / Anti-Corruption

These rules outline prohibited conduct and specific procedures to prevent the risks of bribery and corruption. These risks involve the provision or receipt of gifts or entertainment, including meals, hospitality, and travel costs, in relation to government officials or business partners.

Directors and employees must obtain prior approval from their superior or the head of the business unit when providing gifts, meals, hospitality, or travel invitations to others. These rules establish specific implementation procedures, including the matters that must be included in the prior approval, documenting approvals, investigating and verifying evidential documents of payment and expense reimbursement requests by the accounting officer, and maintaining payment and expense reimbursement documents at least for a period of five years.

◇ Rules on Conflict of Interest

Any situation in which directors' or employees' personal interests or outside activities interfere or appear to interfere, directly or indirectly, with the interests of Panasonic Group, or influence or appear to influence, in any way, the directors' or employees' business decisions, actions, objectivity, loyalty, or ability to perform their jobs are defined as "conflicts of interest" in these rules. In addition to the rules regarding prevention, identification, management, and correction, the rules also offer specific examples of actual or potential conduct that may create conflicts of interest.

Additionally, directors and employees must disclose any actual or potential conflicts of interest

in writing to their supervisor or the head of the business unit. Upon receiving such a disclosure, the supervisor or head of the business unit must consult with the legal officer to evaluate the disclosed information and determine the appropriate measures.

Promotion Efforts

We conduct training for directors and employees involved in duties with a high risk of bribery and corruption, in accordance with our Global Anti-Bribery / Anti-Corruption Policy. Business divisions and consolidated subsidiaries identify those^{*3} within our operating companies and PEX overseas offices who are required to attend training on a regular basis (at least once every two to three years).

*3 Directors and employees who have contact with government officials in the course of their duties

To reduce the risk of indirect bribery and corrupt practices, we have introduced a risk due diligence tool and a risk review process that we use for transactions with sales intermediaries and administrative service providers, in accordance with our Rules on Third-Party Intermediary Risk Management for Anti-Bribery / Anti-Corruption. Specifically, we conduct risk assessments and risk mitigation for new transactions, while also conducting periodic risk assessments and reviewing risk mitigation measures for these transactions on a risk-level-based cycle. We implement these risk mitigation measures through a review process that takes into account corruption risk by country/region and transaction type, based on the Corruption Perceptions Index (CPI) published annually by Transparency International, the type of business partner, and the transaction details.

We also released our Clean Procurement Declaration in 2004 for our procurement divisions. It aims to foster healthy relationships with business partners to ensure that transactions are conducted fairly. Panasonic conducts all procurement in accordance with this Declaration. Furthermore, we have established the Panasonic Supply Chain CSR Promotion Guidelines to fulfill our social responsibility throughout the supply chain. These Guidelines include prohibitions on corruption and bribery, and we ask our business partners to comply with them as well. For more details, refer to the "Responsible Supply Chain" chapter ([page 111-](#)).

Furthermore, we have established the Guidelines for Anti-bribery and Anti-Corruption (For Business Partners) to ensure that all our business partners do not engage in bribery, corruption, or other improper conduct in connection with the Group's business operations. These Guidelines outline our compliance demands for the Group's business partners.

For Business Partners

<Regarding Anti-Bribery and Anti-Corruption>

Panasonic Group is committed to preventing bribery and corruption in its global operations. (For details, refer to “Preventing Bribery and Corruption” above.)

Panasonic Group has established the “Guidelines for Anti-Bribery and Anti-Corruption (For Business Partners),” which explain Panasonic Group’s expectation that business partners will comply with all anti-corruption laws and will not engage in bribery, corruption, or other improprieties in connection with Panasonic Group’s business.

The cooperation of Panasonic Group’s business partners is essential to the success of Panasonic’s compliance with anti-corruption laws. We ask that all our business partners take the time to thoroughly understand these Guidelines and put them into practice.

🔗 **“Guidelines for Anti-Bribery and Anti-Corruption (For Business Partners)” – JAPANESE (PDF file)**
https://holdings.panasonic.jp/corporate/sustainability/pdf/Guideline%20of%20Anti-bribery%20and%20Anti-Corruption_jp.pdf

🔗 **“Guidelines for Anti-Bribery and Anti-Corruption (For Business Partners)” – ENGLISH (PDF file)**
https://holdings.panasonic.jp/corporate/sustainability/pdf/Guideline%20of%20Anti-bribery%20and%20Anti-Corruption_en.pdf

🔗 **“Guidelines for Anti-Bribery and Anti-Corruption (For Business Partners)” – CHINESE (PDF file)**
https://holdings.panasonic.jp/corporate/sustainability/pdf/Guideline%20of%20Anti-bribery%20and%20Anti-Corruption_cn.pdf

Audit

The Panasonic Group annually selects some of its business sites for compliance audits based on bribery and corruption risks. For any business sites where we anticipate having higher risks, such as those doing business in countries or regions where the Corruption Perceptions Index (CPI)—published annually by Transparency International—is low, our Compliance Auditing divisions conduct audits on a rotating basis, reviewing their maintenance and operation of Groupwide compliance rules and regulations at about five business sites annually.

Trade Compliance

The Group has also stipulated global trade compliance rules in the Code of Ethics & Compliance. We also have Rules on Global Trade Restrictions & Sanction Law Compliance to ensure compliance with each country’s trade-related regulations, including security export controls and sanctions laws. Moreover, in Japan, we set standards meant to help us maintain and improve corporate value through the fulfillment of our social responsibility by respecting and following not only laws but also business ethics in our execution of logistics work in the Logistics Operating Standards and Customs Law Compliance Standards. Through these efforts, we ensure trade compliance, including adherence to import/export regulations and trade-related laws and regulations in all countries.

In Japan, the Authorized Economic Operator (AEO) system provides simpler, expedited

customs procedures for business operators that have established cargo security management and legal compliance frameworks. We have received customs administration certification as “Authorized Exporter” in the AEO system. We strive to ensure the safety of our international logistics by selecting companies that provide physical, personnel, and information security, not only for our own operations but also for those of our contractors.

At a global level, we promote our participation in AEO frameworks in all regions. For instance, our US subsidiary Panasonic North America participates in the Customs-Trade Partnership Against Terrorism (C-TPAT). At the same time, we actively promote participation in the AEO framework in other countries, including China.

Ensuring Transparency of Political Contribution Funds

Panasonic Group makes political donations as a part of its corporate social responsibilities. It abides by the Japan Business Federation’s policy which states that: “Costs commensurate with the task are essential to properly maintaining democratic politics. Political donations by companies are a crucial part of companies’ social responsibilities.” When making donations, we comply with the Political Funds Control Act and all other relevant legislation, as well as strict internal rules including the abovementioned global Groupwide rules for preventing bribery and corruption and prohibits any conduct that could lead to suspicion of bribery on the part of public employees or that amount to corrupt practices. We also have regulations in place concerning political contributions, including the reporting and confirming by multiple responsible executives, such as the executive officers in charge of Government and External Relations, Accounting (CFO), and HR & GA (CHRO) of PHD, and obtaining agreement and approval.

Political donations in FY2024: JPY 28.5 million (one donation in Japan)

* The amount of the one FY2025 political donation in Japan will be disclosed by the Ministry of Internal Affairs and Communications (Japan) in November 2025.

As a general rule, we encourage the development of public policy through industry associations. For lobbying in connection with policy recommendations, our Global Anti-Bribery / Anti-Corruption Policy defines lobbying and requires compliance with relevant laws and regulations, and ensures fairness and transparency by requiring that specific lobbying activities must not be reasonably perceived as inappropriate, unethical, or corrupt.

Tax Policy

The Group contributes to the development of society and the resolution of issues through its business activities by paying its fair share of taxes in communities where we operate and in accordance with the tax laws of each country and other tax guidelines published by international organizations such as the OECD. See below for details.

🔗 **Panasonic Group Tax Policy**
https://holdings.panasonic/global/corporate/sustainability/governance/fair-practices/tax_policy.html

Cyber Security and Data Protection

Cyber Security

Recently, cyberattacks have become increasingly sophisticated and creative, raising the risk of large-scale incidents and damage, including targeting our business partners and supply chains. Simultaneously, companies must deploy enterprise cyber security measures, as society demands responsibility for addressing security incidents.

Policy

Panasonic Group promotes Groupwide cyber security measures to protect data and personal information entrusted to us by clients from cyberattacks and ensure stable operations in our information systems, facilities, and the products and services we provide to customers. Specifically, we established the Panasonic Group Cyber Security Operational Rules that apply across the Group alongside other guidelines all employees must follow involving information security, factory system security, and product security. We also regularly evaluate and review these initiatives.

Responsible Executive and Framework

The executive officer responsible for cyber security is the Group Chief Information Officer (Group CIO). The Group Chief Technology Officer (Group CTO) is responsible for factory system and product security (as of August 2025). Panasonic Holdings Corporation (“PHD”) established the Cyber Security Supervisory Office, headed by the Group CIO, to oversee the three aspects of information, factory system, and product security, accelerate and focus cyberattack countermeasures, and promote cyber hygiene (prevention under normal conditions) and cyber resilience (response and recovery during incidents). Furthermore, PHD and our Group companies appoint managers in charge of information security, factory system security, and product security. All Group companies promote security strategies for all functions based on PHD’s basic policy and Groupwide regulations.

Information Security

To mitigate stoppages, unauthorized operation, content falsification, and other damage to the Group’s internal systems, internal and external web services, and other IT systems, Panasonic takes a multifaceted approach to ensure that our IT systems maintain stable operations. We build and update systems following our security policies, conduct periodic vulnerability assessments, and use periodic committee meetings and other means to ensure that IT system

managers at Group companies thoroughly implement our strategies.

Factory System Security

Panasonic established guidelines for breach prevention, anomaly detection, and incident response covering defense against cyberattacks on its factories. We review these guidelines on an ongoing basis. All of Panasonic’s sites worldwide defend against cyberattack risks following these guidelines. We also conduct response training for plant personnel on the assumption that security incidents will occur to help raise awareness.

Product Security

As consumers conveniently use various products equipped with software and connected with networks, we must ensure product security to prevent harm from attacks initiated by malicious third parties who aim to leak or alter data or cause device malfunction. Panasonic establishes internal structure and rules, including guidelines for promoting security-conscious development, and regularly reviews the structure and rules to ensure customer peace of mind when using products. We also promote research and development in AI-based anomaly detection technology to prevent harm from cyberattacks. Moreover, there is training to provide employees with skills necessary to ensure product security such as risk analysis and secure coding.

Joint Initiative

To jointly tackle the above 3 initiatives, we have a dedicated team that regularly collects and monitors information about threats and vulnerabilities and implements countermeasures as necessary, while another team is dedicated to conducting drills in response to an assumed cyberattack.

Data Protection

In the course of business, companies may handle their business partners' data assets and customers' personal information. Improper management of such data may harm stakeholders, including information theft, leakage, and falsification. Panasonic Group is well aware of the importance of protecting personal information and other data entrusted by its business partners and customers through joint research, customer service, and marketing. Thus, we strive to ensure information security Groupwide to prevent data leaks and data tampering.

Policy

In order to gain customer satisfaction and trust through our products and services, the Group believes it is important to recognize various information including personal information entrusted to us by stakeholders such as business partners and customers as important assets for these stakeholders and valuable management resources for the Group. We believe it is important to protect and handle such information appropriately. Furthermore, since the enactment of the EU General Data Protection Regulation (GDPR), personal information protection legislation has been enacted and/or revised in various countries, and its importance is growing as our Group's data utilization business expands.

Therefore, we are committed to ensuring information security and protecting personal information per the information security policies outlined in the Panasonic Group Code of Ethics and Compliance, as well as management regulations and guidelines related to information security, and the basic information security and personal information protection policies established by all Group companies. We ensure transparency in the handling of personal information by providing timely notice or disclosures to users of our products and services or individuals who are the subjects of personal information regarding our purposes for using personal information and other relevant matters and any updates of our policies, as required by applicable laws and regulations, and depending on individual circumstances. We implement the appropriate organizational, technical, and physical security management measures to accurately record information; properly manage, use, and dispose of it; and prevent its unauthorized use, leakage, and falsification. We set limits on retention periods for personal information, depending on the purpose for which the information is acquired and as required by law. We also strive to raise employee awareness through regular employee training, confirm and evaluate the state of our information handling through internal audits, and make improvements as needed.

Furthermore, we ensure that information provided to third parties is protected at a level consistent with the Group's policies by taking all necessary and appropriate measures, including ensuring that they are adequately managed and contracts are signed to ensure that third parties appropriately manage the information provided to them.

We have established systems to respond to requests from individuals regarding the disclosure, correction, or deletion of their personal information, as well as concerns or complaints related to personal information (privacy). We notify or publish the contact point for inquiries in a manner that is easy for individuals to understand and access.

🔗 **Panasonic Group Code of Ethics & Compliance “Protecting and using our company assets (Information Security)”, “Respecting individuals’ privacy”**

<https://holdings.panasonic/global/corporate/about/code-of-conduct.html>

🔗 **Basic Information Security Policy (an example of PHD)**

<https://holdings.panasonic/global/security-policy.html>

Responsible Executive and Framework

The executive officer in charge of information security and protection of personal information is Group Chief Information Officer (Group CIO) (as of August 2025).

Panasonic Group has established responsible person in charge of information security and personal information protection in PHD and each operating company, and each operating company promotes information security initiatives in line with the Basic Information Security Policy and Global Rules, established by PHD.

🔗 **List of ISO27001 certified companies in Panasonic Group in Japan**

<https://holdings.panasonic/global/corporate/sustainability/governance/security/iso27001.html>

Personal Information Protection and Compliance

In recent years, many countries have enacted or revised personal information protection laws and regulations. We recognize the importance of thorough compliance with personal information protection.

As our IoT business grows, our employees are increasingly likely to handle customer lifelogs and other personal information worldwide. Therefore, Panasonic is striving to improve its data management to provide a higher level of privacy protection. Additionally, to comply with the EU General Data Protection Regulation (GDPR), and other laws in various countries, we have prepared response manuals and are strengthening our efforts to ensure compliance and accountability to society through employee education and other measures. Panasonic Group strives to protect personal information based on the Personal Information Protection Policy established by each Group company, which mirrors PHD's policies.

In addition, we are responding to risks by classifying personal information according to its sensitivity and the impact of its disclosure, and then implementing organizational, technical, and physical security control measures depending on that classification. We have mechanisms in

place to check how the Panasonic Group is actually handling personal information, and regularly assess risks related to personal information (privacy).

Ex.) PHD

🔗 **Panasonic Information Protection Policy**

<https://holdings.panasonic/global/privacy-policy.html>

🔗 **Public information and requests for disclosure of personal information based on the “Personal Information Protection Law”. (Japanese only)**

<https://holdings.panasonic/jp/privacy-policy/public-announcement.html>

Responding to Incidents

Panasonic has established reporting and response systems in its incident response rules and thoroughly trains employees to minimize harm during an incident. In the unlikely event of an incident, we also work to uncover the cause and prevent recurrence.

Training

Each year, Panasonic provides all employees with the necessary training to increase their security awareness and promote changes in behavior. Using content tailored to each employee's needs (level-specific for newly hired or promoted employees, or company-wide training), we carry out training on appropriate information management and cyber security along with drills to respond to targeted attacks.

■ FY2025 Groupwide training achievements

Information Security:

- Training content: Enforcing information security and personal information protection
- Target trainees: All employees of Panasonic Group subsidiary and affiliated companies

Cyber Security:

- Training content: Cyber security training and drills
- Target trainees: All employees of Panasonic Group subsidiary and affiliated companies

Independent Assurance Statement by LRQA Limited



LRQA Independent Assurance Statement

Relating to Panasonic Group's Environmental Data within its Sustainability Data Book 2025 for the fiscal year 2025

This Assurance Statement has been prepared for Panasonic Holdings Corporation in accordance with our contract.

Terms of Engagement

LRQA Limited ("LRQA") was commissioned by Panasonic Holdings Corporation ("the Company") to provide independent assurance on its environmental data within its Sustainability Data Book 2025 ("the report") for the fiscal year 2025 (from 1 April 2024 to 31 March 2025) against the assurance criteria below to a limited level of assurance and materiality of the professional judgement of the verifier using ISAE 3000 (Revised) and ISO 14064-3:2019 for greenhouse gas (GHG) emissions.

Our assurance engagement covered the Company's operations and activities relating to the Company and its consolidated subsidiaries in Japan and overseas¹, and specifically the following requirements:

- Verifying conformance with the Company's reporting methodologies for the selected datasets:
- Evaluating the accuracy and reliability of data for only the selected indicators listed below:^{2,3}
 - CO₂ emissions in Business activities (tCO₂e)
 - GHG emissions other than CO₂ from energy use (tCO₂e)
 - Scope 1 GHG emissions (including the breakdown of the GHGs) (tCO₂e)
 - Scope 2 GHG emissions (including the breakdown of the GHGs) (tCO₂e)
 - CO₂ emissions for logistics (tCO₂e)⁴
 - Scope 3 GHG emissions Category 11 (Use of sold products) (tCO₂e)
 - Amount of renewable energy consumption in Business activities (MWh)⁵
 - Energy consumption in Business activity (MWh)
 - Amount of Total Wastes and revenue-generating waste (kiloTonnes)
 - Water withdrawal (m³)
 - Release / Transfer of Substances Requiring Management (Total) (Tonnes)⁶
 - Net Zero CO₂ emissions (45 factories)⁷
 - Avoided CO₂ emissions to Society (tCO₂e)

LRQA's responsibility is only to the Company. LRQA disclaims any liability or responsibility to others as explained in the end footnote. The Company's responsibility is for collecting, aggregating, analysing and presenting all the data and information within the report and for maintaining effective internal controls over the systems from which the report is derived. Ultimately, the report has been approved by, and remains the responsibility of the Company.

LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that the Company has not, in all material respects:

- Met the requirements of the criteria listed above
- Disclosed accurate and reliable environmental data

The opinion expressed is formed on the basis of a limited level of assurance⁸ and at the materiality of the professional judgement of the verifier.

¹ Energy consumption in Business activities, Energy-oriented CO₂ emissions among Scope 1 GHG emissions, Scope 2 GHG emissions cover 218 manufacturing sites and 74 non-manufacturing sites, and GHG emissions other than CO₂ from energy use, Amount of Total Wastes and revenue-generating waste, Water consumption, Release / Transfer of Substances Requiring Management (Total) cover 218 manufacturing sites in the Company and its consolidated subsidiaries in Japan and overseas. CO₂ emissions in Business activities means the sum of Scope 1 and Scope 2 GHG emissions.

² LRQA undertook a limited assurance engagement of the environmental data marked with "✓" within Sustainability Data Book 2025.

³ GHG quantification is subject to inherent uncertainty.

⁴ Only the logistics in Japan is covered. 39 companies in the Panasonic Electric Works Group, and 16 companies in the Panasonic Housing Solutions Group are excluded in the warranty due to "calculation errors" and "omissions in aggregation."

⁵ These are the results for the entire Panasonic Group, including non-manufacturing sites.

⁶ Some consolidated subsidiaries that don't have data collection and aggregation systems in place are not in the scope.

⁷ The scope is 45 locations are shown in the Annex.

⁸ The extent of evidence-gathering for a limited assurance engagement is less than for a reasonable assurance engagement. Limited assurance engagements focus on aggregated data rather than physically checking source data at sites. Consequently, the level of assurance obtained in a limited assurance engagement is lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.



LRQA's Approach

LRQA's assurance engagements are carried out in accordance with ISAE 3000 (Revised) and ISO 14064-3:2019 for GHG emissions. The following tasks were undertaken as part of the evidence gathering process for this assurance engagement:

- Auditing the Company's data management systems to confirm that there were no significant errors, omissions or misstatements in the report. We did this by reviewing the effectiveness of data handling procedures, instructions and systems, including those for internal verification.
- Interviewing with those key people responsible for compiling the data and drafting the report.
- Sampling datasets and traced activity data back to aggregated levels;
- Verifying the historical environmental data and records for the fiscal year 2025; and
- Visiting Panasonic Energy Co., Ltd. (Tokushima Factory) and Panasonic Taiwan Co., Ltd. to confirm the data collection processes, record management practices, and to physically check the main facilities in the scope of the site.
- In order to achieve practically zero CO₂ emissions, verified that each site has achieved full renewable energy use through the use of renewable energy contracts or non-fossil certificates for electricity, and each site has achieved carbon neutrality by using available carbon credits for carbon offset.⁹

Observations

In order to ensure completeness in the extraction of activities for environmental data aggregation, it is effective to be reflected in the procedure manual and make it known to the sites.

LRQA's Standards, Competence and Independence

LRQA implements and maintains a comprehensive management system that meets accreditation requirements for ISO 14065 *Greenhouse gases – Requirements for greenhouse gas validation and verification bodies for use in accreditation or other forms of recognition* and ISO/IEC 17021-1 *Conformity assessment – Requirements for bodies providing audit and certification of management systems – Part 1: Requirements* that are at least as demanding as the requirements of the International Standard on Quality Control 1 and comply with the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants.

LRQA ensures the selection of appropriately qualified individuals based on their qualifications, training and experience. The outcome of all verification and certification assessments is then internally reviewed by senior management to ensure that the approach applied is rigorous and transparent.

LRQA is the Company's certification body for ISO 9001, ISO14001, IATF16949 and AS9100. These certification services do not compromise LRQA's independence or impartiality with respect to the assurance services that LRQA provides to the Company.

Signed

Dated: 30 July 2025

Takahiro Iio
LRQA Lead Verifier
On behalf of LRQA Limited
10th Floor, Queen's Tower A, 2-3-1 Minatomirai, Nishi-ku, Yokohama, JAPAN

LRQA reference: YKA00001141

LRQA, its affiliates and subsidiaries, and their respective officers, employees or agents are, individually and collectively, referred to in this clause as 'LRQA'. LRQA assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant LRQA entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

The English version of this Assurance Statement is the only valid version. LRQA assumes no responsibility for versions translated into other languages.

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⁹ The Company's total GHG emissions are offset by the carbon credit. While LRQA confirmed that these offset credits have been obtained by the Company and offset appropriately, but LRQA has not taken any action against the provider of these carbon credits and expresses no opinion as to whether the offset credits will result in a reduction in CO₂.



Annex

Net Zero CO₂ emissions (45 factories)

Panasonic Eco Technology Center Co., Ltd., Panasonic Energy (Wuxi) Co., Ltd., Panasonic Energy (Suzhou) Co., Ltd., Panasonic Manufacturing (Beijing) Co., Ltd., Panasonic Energy (Thailand) Co., Ltd., Panasonic Do Brasil Ltd. (Includes 3 Factories (San Jose, Manaus, Extrema)), Panasonic Centroamericana S.A., Panasonic Energy Co., Ltd. (Sumoto Factory), Panasonic Energy Higashiura Co., Ltd., Panasonic Energy Nandan Co., Ltd., Panasonic Electronic Devices (Jiangmen) Co., Ltd., Panasonic Industrial Devices (Tianjin) Co., Ltd., Panasonic Industrial Devices Materials (Guangzhou) Co., Ltd., Panasonic Industrial Devices SUNX Suzhou Co., Ltd., Panasonic Energy India Co., Ltd., Panasonic Energy Mexico S.A. de C.V., Panasonic Industry Co., Ltd. (Motomiya), Panasonic Energy Co., Ltd. (Suminoe Factory), Panasonic Energy Co., Ltd. (Tokushima Factory), Panasonic Energy Co., Ltd. (Nishikinohama Factory), Panasonic Motor (Zhuhai) Co., Ltd., Panasonic Motor (Hangzhou) Co., Ltd., Panasonic Industrial Devices Taiko (Shenzhen) Co., Ltd., Panasonic Industrial Devices (Qingdao) Co., Ltd., Panasonic Manufacturing (Xiamen) Co., Ltd., Panasonic Industrial Devices Materials (Suzhou) Co., Ltd., Panasonic Industrial Devices Materials (Shanghai) Co., Ltd., Panasonic Industrial Devices Singapore Pte. Ltd., Panasonic Carbon India Co., Ltd., Panasonic Corporation Electric Works Company Niigata Factory, Panasonic Corporation Electric Works Company Tsu Factory, Panasonic Solar Amorton Co., Ltd., Panasonic Electric Works Electrical Construction Materials Mie Co., Ltd., Headquarter Factory, Panasonic Electric Works Electrical Construction Materials Mie Co., Ltd. Anotsudai Factory, Panasonic Lighting Devices Kumihama Co., Ltd., Panasonic Switchgear Systems Co., Ltd., Panasonic Energy Co., Ltd. (Wakayama Factory), Panasonic Energy Co., Ltd. (Moriguchi Factory), Panasonic Energy Kaizuka Co., Ltd., Panasonic XC KADOMA, Panasonic Manufacturing (Thailand) Co., Ltd., Panasonic Industrial Devices Mexicana S.A. de C.V., Panasonic Manufacturing UK Ltd

GRI Standards Content Index

Statement of use	Panasonic Holdings Corporation has reported the information cited in this GRI content index for the period from April 1, 2024 to March 31, 2025 with reference to the GRI Standards.
GRI 1 used	GRI 1: Foundation 2021

DISCLOSURE		LOCATION
GRI 2: General Disclosures 2021		
1. The organization and its reporting practices		
2-1	Organizational details	Corporate Profile https://holdings.panasonic/global/corporate/about/group-companies/phd.html
2-2	Entities included in the organization's sustainability reporting	Sustainability Data Book> Editorial Policy (p.1)
2-3	Reporting period, frequency and contact point	Sustainability Data Book> Editorial Policy (p.1) Sustainability Data Book> Back cover
2-4	Restatements of information	—
2-5	External assurance	Sustainability Data Book> Independent Assurance Statement (p.154)
2. Activities and workers		
2-6	Activities, value chain and other business relationships	Integrated report https://holdings.panasonic/global/corporate/investors/library/annual-report.html Our Business https://holdings.panasonic/global/corporate/about/business-segments.html Sustainability Data Book> Responsible Supply Chain (p.111)
2-7	Employees	Sustainability Data Book> Social Data> Personnel data (p. 138)
2-8	Workers who are not employees	—
3. Governance		
2-9	Governance structure and composition	Corporate Governance https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html Corporate Governance Report https://holdings.panasonic/global/corporate/investors/pdf/cgr.pdf
2-10	Nomination and selection of the highest governance body	Corporate Governance https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html Corporate Governance Report https://holdings.panasonic/global/corporate/investors/pdf/cgr.pdf
2-11	Chair of the highest governance body	Corporate Governance https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html Corporate Governance Report https://holdings.panasonic/global/corporate/investors/pdf/cgr.pdf
2-12	Role of the highest governance body in overseeing the management of impacts	Sustainability Data Book> Sustainability Management Basic Philosophy & Structure (p.4)
2-13	Delegation of responsibility for managing impacts	Sustainability Data Book> Sustainability Management Basic Philosophy & Structure (p.4) Sustainability Data Book> Environment, Society and Governance chapters ("Environment Governance" (p.29), "Responsible Executive and Framework", "Promoting Organization" (p.121))
2-14	Role of the highest governance body in sustainability reporting	Sustainability Data Book> Sustainability Management Basic Philosophy & Structure (p.4)

DISCLOSURE		LOCATION
2-15	Conflicts of interest	Corporate Governance Report https://holdings.panasonic/global/corporate/investors/pdf/cgr.pdf
2-16	Communication of critical concerns	Sustainability Data Book> Risk Management (p.141-144) Sustainability Data Book> Compliance (p.145-150)
2-17	Collective knowledge of the highest governance body	Sustainability Data Book> Sustainability Management Basic Philosophy & Structure (p. 4)
2-18	Evaluation of the performance of the highest governance body	Corporate Governance https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html Corporate Governance Report https://holdings.panasonic/global/corporate/investors/pdf/cgr.pdf
2-19	Remuneration policies	Corporate Governance https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html Corporate Governance Report https://holdings.panasonic/global/corporate/investors/pdf/cgr.pdf
2-20	Process to determine remuneration	Corporate Governance https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html Corporate Governance Report https://holdings.panasonic/global/corporate/investors/pdf/cgr.pdf
2-21	Annual total compensation ratio	—
4. Strategy, policies and practices		
2-22	Statement on sustainable development strategy	About Panasonic Group> Group CEO's Message https://holdings.panasonic/global/corporate/about/message.html Sustainability Data Book> Group CEO Message (p.3)
2-23	Policy commitments	Sustainability Data Book> Stakeholder Engagement> Respecting Applicable Legislation, Global Standards, Norms, Guidelines, and Initiatives (p.10) Sustainability Data Book> "Policy" section in each chapter Panasonic Group Human Rights and Labour Policy https://holdings.panasonic/global/corporate/sustainability/social/human-rights/policy.html Panasonic Group Code of Ethics & Compliance Chapter 5. Our Social Responsibilities 1. Respecting Human Rights https://holdings.panasonic/global/corporate/about/code-of-conduct/chapter-5.html#Sec_01
2-24	Embedding policy commitments	Sustainability Data Book> Each chapter
2-25	Processes to remediate negative impacts	Sustainability Data Book> Compliance> Whistleblowing System (p.146-147) Sustainability Data Book> Respect for Human Rights> Grievance Mechanism (p.93-94) Sustainability Data Book> Responsible Supply Chain> Systems for Whistleblowing and Seeking Consultation (p.115) Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Contacts for Whistleblowing and Seeking Consultation (p.110)
2-26	Mechanisms for seeking advice and raising concerns	Sustainability Data Book> Compliance> Whistleblowing System (p.146-147) Sustainability Data Book> Respect for Human Rights> Grievance Mechanism (p.93-94) Sustainability Data Book> Responsible Supply Chain> Systems for Whistleblowing and Seeking Consultation (p.115) Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Contacts for Whistleblowing and Seeking Consultation (p.110)
2-27	Compliance with laws and regulations	Sustainability Data Book> Environment> Environmental Risk Management (p.75-76) Sustainability Data Book> Raising Product Quality Levels and Ensuring Product Safety> Internal Company Rules Concerning Product Labeling (p.117-118) Sustainability Data Book> Customer Relations> Promoting Fair and Honest Publicity and Advertising (p.128) Sustainability Data Book> Compliance (p.145-150)

DISCLOSURE		LOCATION
2-28	Membership associations	Sustainability Data Book> Stakeholder Engagement (P.10) Sustainability Data Book> Environment> Activities to raise awareness of and valorize Avoided CO ₂ Emissions (p.27-28) Sustainability Data Book> Respect for Human Rights> Participation in International and Industrial Partnerships (p.94) Sustainability Data Book> Responsible Supply Chain> Industry Collaboration Initiatives (P.113)
5. Stakeholder engagement		
2-29	Approach to stakeholder engagement	Sustainability Data Book> Stakeholder Engagement (p.10)
2-30	Collective bargaining agreements	Sustainability Data Book> Respect for Human Rights> Respect for the Freedom of Association and the Right to Collective Bargaining (p.92-93)
GRI 3: Material Topics 2021		
3-1	Process to determine material topics	Sustainability Data Book> Value Creation Process and Materiality> Materiality Identification Process (p.7)
3-2	List of material topics	Sustainability Data Book> Value Creation Process and Materiality> Materiality (p.6, 9)
3-3	Management of material topics	Sustainability Data Book> Value Creation Process and Materiality> Materiality (p.6-9) Sustainability Data Book> Mid-term to Long-term Environmental Vision (p.15-), Climate Change (p.51-), Resources (p.56-), Respect for Human Rights (p.89-), Maximizing the Potential of Diverse Talent and Organizations (p.95-), AI Ethics (p.121-122), Compliance (p.145-150)

Topic Standards

DISCLOSURE		LOCATION
GRI 201: Economic Performance 2016		
201-1	Direct economic value generated and distributed	Annual Securities Report (the 118th Business Term)> Overview of Panasonic Group https://holdings.panasonic/content/dam/holdings/global/en/corporate/investors/pdf/securities-report/Report2024.pdf Sustainability Data Book> Social Data> Corporate citizenship activities data (p.140)
201-2	Financial implications and other risks and opportunities due to climate change	Sustainability Data Book> Environment> Strategic Resilience through Scenario Analysis (p.41-44) Sustainability Data Book> Risk Management> PHD Major Strategic Risk in Fiscal 2026 (p.143)
201-3	Defined benefit plan obligations and other retirement plans	Annual Securities Report (the 118th Business Term)> Consolidated Financial Statement https://holdings.panasonic/content/dam/holdings/global/en/corporate/investors/pdf/securities-report/Report2024.pdf
201-4	Financial assistance received from government	—
GRI 202: Market Presence 2016		
202-1	Ratios of standard entry level wage by gender compared to local minimum wage	—
202-2	Proportion of senior management hired from the local community	—
GRI 203: Indirect Economic Impacts 2016		
203-1	Infrastructure investments and services supported	Sustainability Data Book> Community Relations (p.134-147)
203-2	Significant indirect economic impacts	Sustainability Data Book> Social Data> Corporate citizenship activities data (p.140)
GRI 204: Procurement Practices 2016		
204-1	Proportion of spending on local suppliers	—

DISCLOSURE		LOCATION
GRI 205: Anti-corruption 2016		
205-1	Operations assessed for risks related to corruption	Sustainability Data Book> Compliance> Preventing Bribery and Corruption (p.148-150)
205-2	Communication and training about anti-corruption policies and procedures	Sustainability Data Book> Compliance> Internal Communication and Training (p.146) Sustainability Data Book> Compliance> Preventing Bribery and Corruption (p.148-150)
205-3	Confirmed incidents of corruption and actions taken	Sustainability Data Book> Compliance> Preventing Bribery and Corruption (p.148-150)
GRI 206: Anti-competitive Behavior 2016		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Sustainability Data Book> Compliance> Preventing Cartels (p.148)
GRI 207: Tax 2019		
207-1	Approach to tax	Sustainability Data Book> Compliance> Tax policy (p.150) Panasonic Group Tax Policy https://holdings.panasonic/global/corporate/sustainability/governance/fair-practices/tax_policy.html
207-2	Tax governance, control, and risk management	Panasonic Group Tax Policy https://holdings.panasonic/global/corporate/sustainability/governance/fair-practices/tax_policy.html
207-3	Stakeholder engagement and management of concerns related to tax	Panasonic Group Tax Policy https://holdings.panasonic/global/corporate/sustainability/governance/fair-practices/tax_policy.html
207-4	Country-by-country reporting	—
GRI 301: Materials 2016		
301-1	Materials used by weight or volume	—
301-2	Recycled input materials used	This information is not calculated given the difficulty in defining main products due to the diversity of business operations. See Evolution of Recycling-Oriented Manufacturing for specific initiatives. Sustainability Data Book> Environment> Evolution of Recycling-Oriented Manufacturing (p.59-63)
301-3	Reclaimed products and their packaging materials	—
GRI 302: Energy 2016		
302-1	Energy consumption within the organization	Sustainability Data Book> Environment> Overview of Environmental Impact and Environmental Accounting (p.36) Standard for Calculating https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2025e.pdf
302-2	Energy consumption outside of the organization	Sustainability Data Book> Environment> Overview of Environmental Impact and Environmental Accounting (p.36) Standard for Calculating https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2025e.pdf
302-3	Energy intensity	—
302-4	Reduction of energy consumption	Sustainability Data Book> Environment> Mid-term to Long-term Environmental Vision (p.15-16)
302-5	Reductions in energy requirements of products and services	Sustainability Data Book> Environment> Mid-term to Long-term Environmental Vision (p.15-16)
GRI 303: Water and Effluents 2018		
303-1	Interactions with water as a shared resource	Sustainability Data Book> Environment> Ways of Thinking about Water Resource Conservation (p.73-74)
303-2	Management of water discharge-related impacts	—

DISCLOSURE		LOCATION
303-3	Water withdrawal	Sustainability Data Book> Environment> Initiatives for Water Resource Conservation through Production Activities (p.74) Standard for Calculating https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2025e.pdf
303-4	Water discharge	Sustainability Data Book> Environment> Initiatives for Water Resource Conservation through Production Activities (p.74) Standard for Calculating https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2025e.pdf
303-5	Water consumption	Sustainability Data Book> Environment> Initiatives for Water Resource Conservation through Production Activities (p.74) Standard for Calculating https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2025e.pdf
GRI 304: Biodiversity 2016		
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Sustainability Data Book> Environment> Response to TNFD (p.47-48)
304-2	Significant impacts of activities, products and services on biodiversity	Sustainability Data Book> Environment> Response to TNFD (p.47)
304-3	Habitats protected or restored	Sustainability Data Book> Environment> Biodiversity Conservation (p.69-70)
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	Forest of Coexistence Monitoring Report (Japanese Version Only) https://www.panasonic.com/jp/about/sustainability/environment/ecology/kusatsu_factory.html
GRI 305: Emissions 2016		
305-1	Direct (Scope 1) GHG emissions	Sustainability Data Book> Environment> Overview of Environmental Impact and Environmental Accounting (p.37) Sustainability Data Book> Environment> Reducing CO₂ Emissions in Factories (p.52-55) Standard for Calculating https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2025e.pdf
305-2	Energy indirect (Scope 2) GHG emissions	Sustainability Data Book> Environment> Overview of Environmental Impact and Environmental Accounting (p.37) Sustainability Data Book> Environment> Reducing CO₂ Emissions in Factories (p.52-55) Standard for Calculating https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2025e.pdf
305-3	Other indirect (Scope 3) GHG emissions	Sustainability Data Book> Environment> Overview of Environmental Impact and Environmental Accounting (p.37) Standard for Calculating https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2025e.pdf
305-4	GHG emissions intensity	Sustainability Data Book> Environment> Reducing CO₂ Emissions in Factories (p.55)
305-5	Reduction of GHG emissions	Sustainability Data Book> Environment> Mid-term to Long-term Environmental Vision (p.15-16)
305-6	Emissions of ozone-depleting substances (ODS)	Managed as a substance whose use must be suspended immediately in case it is currently used.
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	Sustainability Data Book> Environment> Chemical Substance Management> Activities to Reduce Negative Environmental Impact at Factories (p.81-83)
GRI 306: Waste 2020		
306-1	Waste generation and significant waste-related impacts	Sustainability Data Book> Environment> Resources> Evolution of Recycling-Oriented Manufacturing (p.59-63)

DISCLOSURE		LOCATION
306-2	Management of significant waste-related impacts	Sustainability Data Book> Environment> Overview of Environmental Impact and Environmental Accounting (p.36) Sustainability Data Book> Environment> Resources> Evolution of Recycling-Oriented Manufacturing (p.59-63)
306-3	Waste generated	Sustainability Data Book> Environment> Resources> Evolution of Recycling-Oriented Manufacturing (p.59-63)
306-4	Waste diverted from disposal	Sustainability Data Book> Environment> Resources> Evolution of Recycling-Oriented Manufacturing (p.59-63) Standard for Calculating https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2025e.pdf
306-5	Waste directed to disposal	Sustainability Data Book> Environment> Overview of Environmental Impact and Environmental Accounting (p.36) Sustainability Data Book> Environment> Resources> Evolution of Recycling-Oriented Manufacturing (p.59-63)
GRI 308: Supplier Environmental Assessment 2016		
308-1	New suppliers that were screened using environmental criteria	—
308-2	Negative environmental impacts in the supply chain and actions taken	Though comprehensive aggregation is not currently conducted, scope of the CSR self-assessment checklist has been expanded to cover Asian countries from fiscal 2017 in an effort to understand environment burden.
GRI 401: Employment 2016		
401-1	New employee hires and employee turnover	Sustainability Data Book> Social Data > Career and human resources development data (p.139)
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	—
401-3	Parental leave	Sustainability Data Book> Social Data > Data on diversity and work styles (p.138)
GRI 402: Labor/Management Relations 2016		
402-1	Minimum notice periods regarding operational changes	—
GRI 403: Occupational Health and Safety 2018		
403-1	Occupational health and safety management system	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110)
403-2	Hazard identification, risk assessment, and incident investigation	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110)
403-3	Occupational health services	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110)
403-4	Worker participation, consultation, and communication on occupational health and safety	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110)
403-5	Worker training on occupational health and safety	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110) Sustainability Data Book> Social Data > Occupational health and safety data (p.140)
403-6	Promotion of worker health	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110)
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110)

DISCLOSURE		LOCATION
403-8	Workers covered by an occupational health and safety management system	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110)
403-9	Work-related injuries	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110) Sustainability Data Book> Social Data > Occupational health and safety data (p.140)
403-10	Work-related ill health	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Creating a Safe, Secure, and Healthy Workplace (p.105-110)
GRI 404: Training and Education 2016		
404-1	Average hours of training per year per employee	Sustainability Data Book> Social Data > Career and human resources development data (p.139)
404-2	Programs for upgrading employee skills and transition assistance programs	Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations (p.95-110)
404-3	Percentage of employees receiving regular performance and career development reviews	Sustainability Data Book> Social Data > Career and human resources development data (p.139) Sustainability Data Book> Maximizing the Potential of Diverse Talent and Organizations> Evaluation and Compensation (p.99)
GRI 405: Diversity and Equal Opportunity 2016		
405-1	Diversity of governance bodies and employees	Sustainability Data Book> Social Data > Data on diversity and work styles (p.138) Corporate Governance https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html
405-2	Ratio of basic salary and remuneration of women to men	Sustainability Data Book> Social Data > Data on diversity and work styles (p.138)
GRI 406: Non-discrimination 2016		
406-1	Incidents of discrimination and corrective actions taken	—
GRI 407: Freedom of Association and Collective Bargaining 2016		
407-1	Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	Sustainability Data Book> Respect for Human Rights> Human Rights Due Diligence (p.90-93) Sustainability Data Book> Responsible Supply Chain> Supply Chain Due Diligence (p.112-113)
GRI 408: Child Labor 2016		
408-1	Operations and suppliers at significant risk for incidents of child labor	Sustainability Data Book> Respect for Human Rights> Human Rights Due Diligence (p.90-93) Sustainability Data Book> Responsible Supply Chain> Supply Chain Due Diligence (p.112-113)
GRI 409: Forced or Compulsory Labor 2016		
409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Sustainability Data Book> Respect for Human Rights> Human Rights Due Diligence (p.90-93) Sustainability Data Book> Responsible Supply Chain> Supply Chain Due Diligence (p.112-113)
GRI 410: Security Practices 2016		
410-1	Security personnel trained in human rights policies or procedures	—
GRI 411: Rights of Indigenous Peoples 2016		
411-1	Incidents of violations involving rights of indigenous peoples	—

DISCLOSURE		LOCATION
GRI 413: Local Communities 2016		
413-1	Operations with local community engagement, impact assessments, and development programs	—
413-2	Operations with significant actual and potential negative impacts on local communities	—
GRI 414: Supplier Social Assessment 2016		
414-1	New suppliers that were screened using social criteria	Sustainability Data Book> Responsible Supply Chain> Supply Chain Due Diligence (p.112-113)
414-2	Negative social impacts in the supply chain and actions taken	Sustainability Data Book> Responsible Supply Chain> Supply Chain Due Diligence (p.112-113)
GRI 415: Public Policy 2016		
415-1	Political contributions	Sustainability Data Book> Compliance> Ensuring Transparency of Political Contribution Funds (p.150)
GRI 416: Customer Health and Safety 2016		
416-1	Assessment of the health and safety impacts of product and service categories	—
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	Sustainability Data Book> Raising Product Quality Levels and Ensuring Product Safety> Major Accidents and Responses (p.118-119)
GRI 417: Marketing and Labeling 2016		
417-1	Requirements for product and service information and labeling	Sustainability Data Book> Raising Product Quality Levels and Ensuring Product Safety> Internal Company Rules Concerning Product Labeling (p.117-118)
417-2	Incidents of non-compliance concerning product and service information and labeling	No incidents of non-compliance
417-3	Incidents of non-compliance concerning marketing communications	Sustainability Data Book> Customer Relations> Promoting Fair and Honest Publicity and Advertising (p.128)
GRI 418: Customer Privacy 2016		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	—
GRI 306: Effluents and Waste 2016		
306-3	Significant spills	—

Panasonic Group

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