Sustainability Data Book 2023

Panasonic Group

Panasonic Group

About the Sustainability Data Book 2023

Panasonic Group reports on sustainability through our Sustainability page on our website and this Sustainability Data Book. Regarding environmental activities, we select main topics for this report from the content on the website such as our policy, approach, and performance data. For specific examples of initiatives, and more details generally, please refer to the Panasonic Sustainability website. Also, top management insights about sustainability are disclosed in our Annual Report (an integrated report).

WEB **Sustainability Site:**
https://holdings.panasonic/global/corporate/sustainability.html

WEB **Annual Report:**
https://holdings.panasonic/global/corporate/investors/library/annual-report.html

Scope of Reporting

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

■ **Period:** Fiscal 2023 (April 1, 2022 to March 31, 2023)

■ **Organization:** Panasonic Group (Panasonic Holdings Corporation and its consolidated subsidiaries), not included: Ficosa International S.A., a consolidated subsidiary since April 2017 and its consolidated subsidiaries. In this data book, “the company” means Panasonic Holdings Corporation, and “we”, “Panasonic”, and “the Group” mean the Panasonic Group mentioned above.

■ **Data:**

- Data concerning manufacturing business sites cover all the manufacturing business sites (totaling 227) that constitute the Panasonic Group’s environmental management system
- Energy data and CO_2 emissions data from energy sources are added for non-manufacturing sites (72)
- Data for which the fiscal year and region are not expressly stated are global results for fiscal 2023

Assurances

Main data relating to the environment have been assured by LRQA Limited. For details on the indicators covered by the assurance, please refer to the Independent Assurance Report on P148
Assured indicators are marked with ★.

Reference Guidelines

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

Structure of Reporting on Sustainability Initiatives

Panasonic Group site

WEB **Group CEO’s Message**
https://holdings.panasonic/global/corporate/about/message.html

WEB **The Basic Business Philosophy of the Panasonic Group**
https://holdings.panasonic/global/corporate/about/philosophy.html

WEB **Panasonic Group Code of Ethics & Compliance**
https://holdings.panasonic/global/corporate/about/code-of-conduct.html

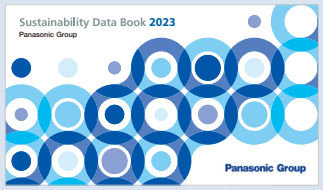
WEB **Corporate Governance**
https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html

Sustainability Site

Provides comprehensive reports and information about the company’s initiatives, attitudes and annual activities concerning Environmental, Social and Governance topics.

Sustainability Databook

Primarily reports on themes and data of particularly high interest to stakeholders.



ESG themes
(Excerpts, links, etc.)

Information for Investors

Mainly intended for investors. Releases information on business strategy, financial situation, and non-financial information.

Annual Report
(an integrated report)

2023 edition will be published soon

Sustainability Data Book 2023
Contents

Corporate Profile

as of March 31, 2023

Company Name: Panasonic Corporation

Company Headquarters:
1006 Oaza Kadoma, Kadoma City,
Osaka 571-8501, Japan
Tel: +81-6-6908-1121

Incorporated: December 15, 1935

Founded: March 7, 1918

President: Yuki Kusumi

Common Stock: 259.3 billion yen

FY2022 Financial Result

Net sales 8,378.9 billion yen

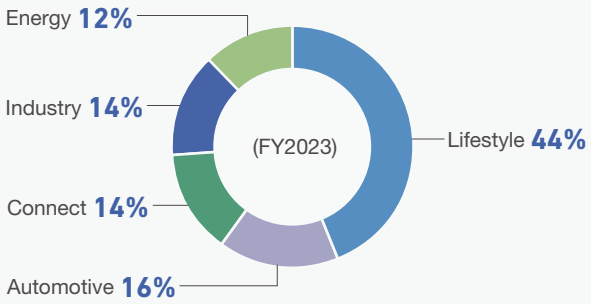
Operating profit 288.6 billion yen

Profit before income taxes 316.4 billion yen

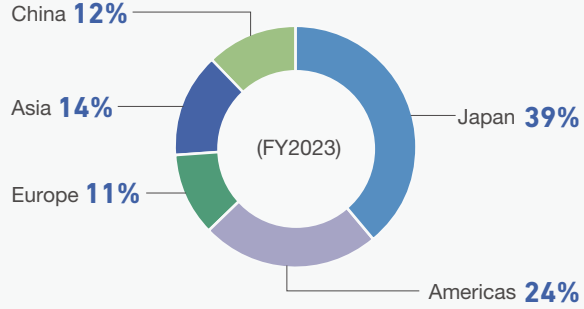
Net profit attributable to Panasonic Corporation stockholders 265.5 billion yen

Number of Employees 233,391

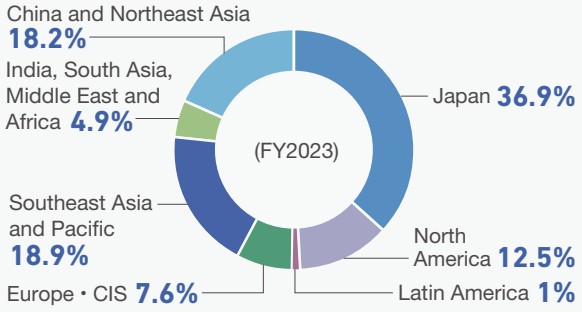
Sales by Segment



Sales by Region



Employees by Region



Main Products and Services

The Panasonic Group's major products and services, by segment, are as follows:

■ Lifestyle

Refrigerators, microwave ovens, rice cookers, washing machines, vacuum cleaners, personalcare products, air-conditioners for residential, and commercial use, heat pump-type hot water heaters, ventilation, perflation and airconditioning equipment, air purifiers, air purifier/sterilizers, freezing or refrigerating showcases, lighting fixtures, lamps, wiring devices, solar photovoltaic systems, fuel cells, compressors, bicycles, nursing care services

■ Automotive

Automotive-use infotainment systems, head-up displays, automotive speakers, automotive switches, advanced driver assistance systems (ADAS) and related devices, systems and devices for xEVs, Interior rearview mirrors

■ Connect

Aircraft in-flight entertainment systems and communications services, electroniccomponents-mounting machines, welding equipment, projectors, professional AV systems, PCs and tablets, solutions for various industries, installation/operation/maintenance services, supply chain management software

■ Industry

Relays, switches, power supplies, touch panels, motors, sensors, laser markers, capacitors, inductors, resistors, circuit board materials, semiconductor device materials, molding compounds, LCD panels

■ Energy

Cylindrical lithium-ion batteries for in-vehicle use, dry batteries, primary/secondary lithium batteries, nickel-metal hydride batteries, lithium-ion batteries, storage battery modules/systems

■ Other (businesses not included in reportable segments)

TV, digital camera, video equipment, audio equipment, telephone, intercom, kitchen & bathroom fittings, interior products, exteriors

Our Approach to Sustainability Management

Panasonic's Sustainability Management

The Panasonic Group's mission is to realize an ideal society offering material and spiritual affluence. This stems from the notion of achieving prosperity both in matter and mind, which is the ideal state of society that our founder, Konosuke Matsushita, envisioned and pursued throughout his life. In 1932, Konosuke Matsushita defined 25 years as one phase and declared the company's resolve to help realize an ideal society over 10 phases or 250 years. Since then, in pursuit of this mission, we have been dedicated to people's well-being and material abundance and worked to solve social challenges by offering a wide variety of products to the world.

However, today's society falls short of the ideal state that our founder aspired to. Many societies, especially those in developed nations, are replete with material goods. Nevertheless, we face various serious social issues, including rapidly worsening environmental destruction and depletion of natural resources, shifts in demographics such as worldwide population growth, and a declining birthrate and aging population in advanced countries. Therefore, there is great concern that our children and grandchildren, and our descendants, including those in 2181, the final year of the Group's 250-year plan, may not be able to enjoy lives of affluence both in matter and mind.

In order for us at Panasonic to continue contributing to the achievement of a sustainable society, we must ensure our continued existence as a company. Therefore, from the perspective of the effect on our finances as well as society, we have identified important opportunities and risks related to sustainability as priority issues (materiality). Based on this approach, we will work to enhance sustainability management both by creating new business opportunities and reducing risks.

The Panasonic Group has also defined the following two highest priorities as a Group-wide strategy. In order to accomplish the first task of contributing to solving global environmental issues, we have been promoting initiatives under Panasonic GREEN IMPACT, a long-term environmental vision established in the fiscal year that ended in March 2023. The second task involves helping our customers stay healthy, safe, and comfortable throughout their lives, for which we will demonstrate the Group's collective strengths with the aim of becoming a Lifestyle Solutions Provider that can propose value tailored to each of its diverse customers.

The ideal society we at Panasonic pursue cannot be achieved through our efforts alone. We can realize it only through engagement with our stakeholders, including customers, business partners, shareholders, employees, and communities. As a public entity of society, the Panasonic Group believes that achieving growth and development alongside all stakeholders is the only way to reach this goal. This idea persists unchanged to this day, even as time has passed and society has progressed. In fact, we believe that this back-to-basics management approach will gain further significance as a multitude of global social issues worsen, and the international community strives to achieve a sustainable society through initiatives like the SDGs (Sustainable Development Goals).

The Panasonic Group will continue providing value to society and customers into the future through its business activities to help all stakeholders live their best, thereby enhancing the Group's value.

Yuki Kusumi
Group CEO

The Promotion of Sustainability Management

The Advancement of Sustainability Management

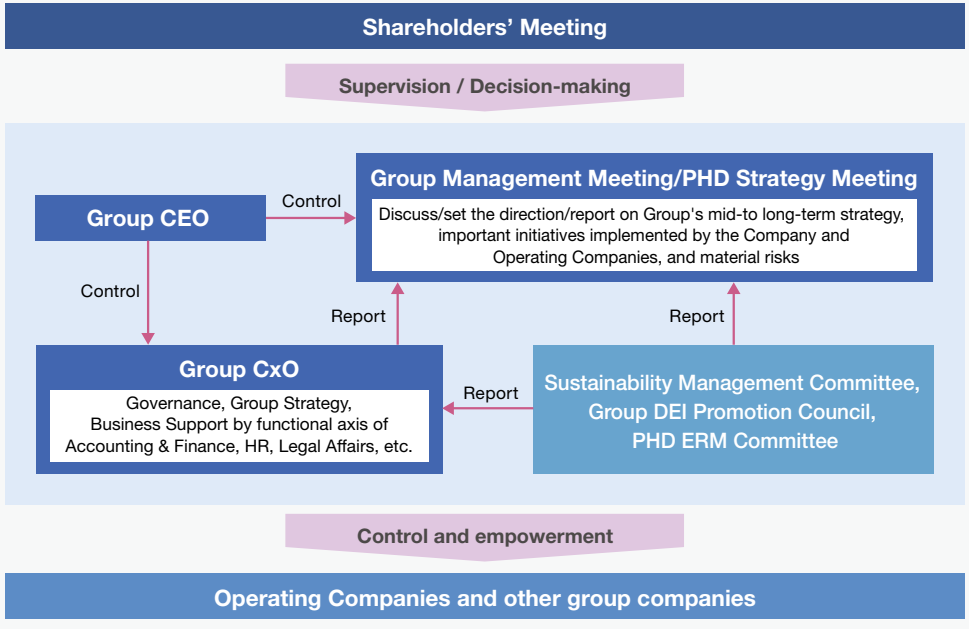
In April 2022, the Panasonic Group transitioned to an operational company system (holding company system) in order to thoroughly implement autonomous responsible management and strengthen the competitiveness of our business from a medium- to long-term perspective.

Each Operating Company, which will be spun off as a result of the transition to an operating company system, will be able to make decisions quickly in response to changes in the external environment and flexibly design systems according to business characteristics, etc., with greatly expanded authority and responsibilities, thus significantly strengthen our competitiveness.

The holding company monitors non-financial indicators, or competitiveness KPIs, to enhance the competitiveness of each Operational Company.

In addition, various committees were set up to deal with the group's major issues, and in these committees, we openly discuss and set the direction for specific measures, actively support the strengthening of the competitiveness of each Operational Company, and develop growth strategies from a Group-wide perspective. Through those activities, we strive to improve corporate value as a group.

The Promotion Structure of Sustainability Management (as of Aug. 2023)



- 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)
- PHD Strategy Meeting: chaired by Group CEO, consisting of ca. 10 Executive members, including the head of functions such as HR, accounting, legal, and others (held twice a month in principle)
- PHD: Panasonic Holdings Corporation
- ERM: Enterprise Risk Management

Materiality

Purpose of identifying materiality

We have identified important opportunities and risks related to sustainability as priority issues (materiality) from the two perspectives of "financial effects on the Company" and "impact on society." We aim to improve our sustainability management by promoting materiality initiatives, creating new business opportunities, and lowering risks.

Materiality will be reviewed as appropriate based on changes in the business environment and dialogues with stakeholders.

Process of identifying materiality

From a list of items that included demands from society and foreseeable future challenges, we selected issues that could represent opportunities and risks for the Group. Next, we assessed them from the two perspectives of the Group and its stakeholders, and 11 priority issues were extracted.

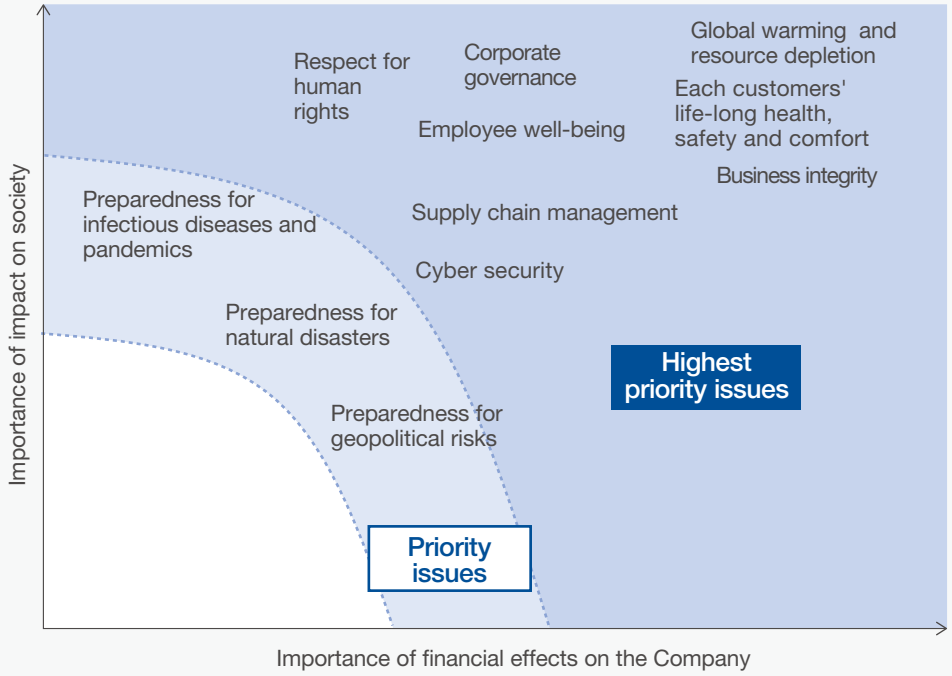
We confirmed the validity of these analysis processes and the priority issues we extracted through dialogue with external experts.

The materiality was identified after deliberation at the meetings of the Group's Sustainability Management Committee, the Group Management Meeting, and the Board of Directors of the Company.

STEP 1	Extract sustainability-related items	Among current and future sustainability issues, **selected issues** that could represent opportunities and risks for the Group (based on analysis of trends in international standards and regulations, stakeholder concerns, megatrends, etc.)
STEP 2	Assess importance of items	Assessed the level of importance of "**financial effects on the Company**" and "**impact on society**" for each selected issue from the perspectives of the Group and its stakeholders
STEP 3	Select priority issues	Based on the assessment results in STEP 2, **extracted 11 priority issues**
STEP 4	Validate processes and results	Consulted sustainability experts on the validity of the analysis processes and the priority issues we extracted
STEP 5	Deliberate and identify	Identified materiality after deliberation at the meetings of the Sustainability Management Committee, the Group Management Meeting, and the Board of Directors of the Company

Materiality assessment results

We assessed the level of importance of each item from the perspective of the Group and its stakeholders and identified 11 material issues.



Note: Some of the materiality items are similar to the names of "Group Major Risks / PHD Major Strategic Risks" determined by risk management activities; however, due to different objectives and identification processes, their corresponding initiatives are partly different. For more details, see "Risk Management" chapter (on page 130).

Examples of initiatives to address priority issues

● Increase positive impact ● Mitigate negative impact

	Materiality	Main initiatives	Targets	Reporting on related items
Highest priority issues	**Global warming and resource depletion**	**Panasonic GREEN IMPACT** ● Expansion of automotive batteries for EVs, Air to Water heat pump (hot-water and heating system with heat pump), and hydrogen fuel cells ● Environmental energy technology innovation (water electrolysis, perovskite solar cells , DERMS) ● Reduction of in-house CO_2 emissions (expansion of zero-CO_2 factories , expansion of energy-saving equipment) ● Expansion of circular economy businesses and products	• CO_2 reduction impact of 300 million tons (by 2050) • Net-zero CO_2 emissions from all factories (by 2030) • Waste recycling ratio of 99% or more (by 2024)	Sustainability Data Book 2023 • Environment P9 Sustainability site • Environment
	Each customers' life-long health, safety and comfort	● As a "lifestyle solutions provider" that delivers value tailored to each customer, we combine our diverse customer touchpoints with digital technology to contribute to each customer's life-long health, safety and comfort		—
	Business integrity	● Promoting understanding of and confirming compliance with the Panasonic Group Code of Ethics & Compliance and internal rules, and complying with relevant laws ● Dissemination and appropriate operation of the whistleblowing system ● ● Protection and utilization of our intellectual property and respect for the intellectual property of third parties		Sustainability Data Book 2023 • Business Ethics P137 • Intellectual Property P121
	Supply chain management	● Elimination of waste and stagnation in the supply chain ● Strengthening of supply chain by promoting multiple suppliers and review of manufacturing sites		Sustainability Data Book 2023 • Risk Management P130
	Employee well-being	● Creating a safe, secure, and healthy workplace (thorough implementation of safety and compliance, promotion of health initiatives) ● Encouraging employees' self-motivated endeavors and supporting their self-determined career formation (Allowing side jobs and provide opportunities for skill development, providing wider options for working time and place to work remotely, and personnel exchanges in the Group through open recruitment) ● Promoting DEI (Diversity, Equity & Inclusion) (top management commitment, creating an inclusive work environment, support for each individual)	• Eradication of serious workplace accidents and injuries • Global top level in the Employee Opinion Survey score categories of employee engagement and employee enablement (by 2030)	Sustainability Data Book 2023 • Employee Well-being P80
	Corporate governance	● ● With the transition to a holding company system, significant authority was delegated to the operating companies, with officers of the Panasonic Holdings Corporation participating in the management of the operating companies as directors ● Linkage of non-financial KPIs to executive remuneration		Corporate information site • Panasonic Holdings Corporation "Corporate Governance"
	Respect for human rights	● Promoting initiatives based on the Panasonic Group Human Rights and Labour Policy ● Implementing human rights due diligence based on global standards for the Group's own operations and in the supply chain ● Promotion of engagement with stakeholders and appropriate disclosure of information		Sustainability Data Book 2023 • Respect for Human Rights P74 • Responsible Supply Chain P102 • AI Ethics P112
	Cyber security	● Centralization of common cyber security functions across manufacturing, information systems, and product areas to strengthen countermeasures during normal times and incident responses during emergencies ● Gradual expansion of scope of cyber security countermeasures, including to supply chains		Sustainability Data Book 2023 • Cyber Security and Data Protection P143
Priority issues	**Preparedness for geopolitical risks**	● ● Monitoring of international situation and trends in policies, laws, and regulations in each country and geographic region to ascertain the impact on the Group's business and respond in a timely manner ● ● Closely monitoring and responding to changes in the business environment caused by economic security policies in each country in terms of business threats and opportunities		Sustainability Data Book 2023 • Risk Management P130
	Preparedness for infectious diseases and pandemics	● Formulating Group policies for each country based on analysis of its government policies, regulatory trends, infection conditions, etc., and setting and implementing detailed rules at each business site		
	Preparedness for natural disasters	● Enhancement of stockpiling and drills during normal times and establishment of a safety confirmation system; establishment of a Groupwide Emergency Response Headquarters system in the event of an emergency		

Respecting Applicable Legislation, Global Standards, Norms, Guidlines, and Initiatives.

Panasonic Group conducts its business based on applicable legislation, as well as global standards, specifications, norms, guidelines, and various initiatives. The Panasonic Group signed the United Nations Global Compact.

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

In addition, Panasonic Holdings Co., Ltd. has joined the Responsible Business Alliance (RBA) as the Panasonic Group in order to strengthen CSR procurement initiatives in the supply chain.

Promoting Initiatives Based on Dialogues with Stakeholders

Panasonic Group conducts dialogues with its wide range of stakeholders around the world—including customers, investors, suppliers, governments, industry bodies, NPOs, NGOs, local communities, and employees—on various aspects of its business. The company incorporates the opinions it receives into its business activities and product creation.

Major Stakeholders

Environment

Policy

Contributing to society has been the management philosophy for the Panasonic Group ever since its founding, and we have been taking measures against pollution since the 1970s. We announced the Environmental management basic policy in 1991, and the Environmental Statement in 1993, clarifying our approaches to address global environmental issues as a public entity of society. Since then we have been carrying out initiatives including matters on global warming prevention and resources recycling corporate-wide, aiming to attain a sustainable, safe, and secure society.

After the completion of the Green Plan 2010 which was established in 2001, the Green Plan 2018 was established in 2010 to clarify our targets for fiscal 2019 (from April 1, 2018 to March 31, 2019) as well as an action plan for all employees in order to achieve the targets. The Green Plan 2018 will continue our initiatives in five areas: CO_2 reduction, resources recycling, water, chemical substances, and biodiversity.

In 2013, we introduced a new brand slogan, “A Better Life, A Better World,” aiming to realize a better life for all its customers, and is promoting environmental initiatives as an important element in achieving that goal. Based on this, the Green Plan 2018 was revised in 2013, followed by the newly-established Environmental Action Guideline.

Furthermore, in response to rising demand by the society for CO_2 reductions following the 21st session of the Conference of the Parties (COP21) of the United Nations Conference on Climate Change, and to the need to make changes to our business structure, including growth in the automotive and B2B businesses, the Plan was revised again in 2016.

Additionally, we formulated the Environment Vision 2050 in 2017 to achieve “a better life” and “a sustainable global environment,” aiming for a society with clean energy and a more comfortable lifestyle. Under the Vision, through the development of products, technologies, and solutions relating to energy creation, storage, saving, and management, we will work towards creation and more efficient utilization of energy which exceeds the amount of energy used.

We announced Green Plan 2021 in 2019, following completion of Green Plan 2018, with a focus on key issues for achieving the Panasonic Environment Vision 2050, and we have been working on the issues. On January 2022, we announced Panasonic GREEN IMPACT, our long term environment vision,founded based on Panasonic Group's belief that the top priority action for the entire Group should be focused on global environment issues including climate change, which is a pressing task for the entire world.

The Panasonic GREEN IMPACT is the result of a shift from the Panasonic Environment Vision 2050, with the aim of achieving carbon neutrality together with creating impacts from actions (ACT) that reduce CO_2 emissions from Panasonic Group as well as from various sectors of the society. To achieve Panasonic GREEN IMPACT, we are working on initiatives under our newly developed GREEN IMPACT PLAN 2024.

Environmental Policy

Environmental Statement

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.

Environmental Action Guideline

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 CO_2 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 technical 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

GREEN IMPACT PLAN 2024 (see pages 12-13)

We strive to grow and develop our business through the creation of environmental value for customers with our technical strengths while each and every employee follows the Environmental Policy to address environmental challenges. Therefore, collaboration with stakeholders including our partners is essential. We will continue to sincerely work on environmental sustainability management through further collaboration with stakeholders.

Mid-term to Long-term Environmental Vision

What we should be in the future as the Panasonic Group and solution for 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. Roughly 90 years ago in 1932, the founder declared his ambition to create an ideal society over a span of 250 years, across ten generations. Since then, we have carried on his ambition and made our contribution through businesses to solve the social issues of the times and to work for the happiness of each customer.

At present, the biggest challenge that prevents us from achieving our mission is against global environmental issues. We must avoid the situation at any cost where our planet is no longer habitable in approx. 160 years which is the year of reaching our goal for achieving our mission, far from bringing happiness to our descendants. In order to hold back environmental pollution, depletion of finite resources, and the most serious and urgent issues of global warming as early as possible, we must achieve net zero total CO_2 emissions throughout society as a whole, as soon as possible. In our determination to play a major role in contributing to this goal and lead to solve the issues without fail, we announced "Panasonic GREEN IMPACT (PGI)", the Group's long-term environmental vision in January 2022 , and we have been accelerating our initiatives to contribute to reduction of emissions from our business activities, as well as from our customers and from society.

Panasonic GREEN IMPACT

PGI was established with the following thoughts to stop global warming. Addressing the scale of both of the Panasonic Group's 'responsibility' that is to reduce emissions from our business activities and 'opportunity' that is to contribute to avoiding emissions for society, by accumulating each of our diligent efforts (Act), we aim to achieve carbon neutrality (CN) through reducing CO_2 emissions from our business activities and from society and working in concert with society. With the aim of creating a carbon neutral society by 2050, we have developed a strategy for each of our business fields backcasted from the social reforms to be implemented by 2030. In April 2022, with a classification of PGI into ❶ OWN IMPACT, signifying fulfillment of own responsibilities, ❷ CONTRIBUTION IMPACT, referring to opportunities to contribute, and ❸ FUTURE IMPACT, along with INFLUENCE (+) that means the positive ripple effects on our customers and society, we announced our plan to create an impact by 2050 from our emissions reductions of more than 300 million tons[*2] in total for ❶, ❷ and ❸: that is approx. 1% of the global CO_2 emissions of 31.7 billion tons[*1] today. This was followed by our milestone announcement in July 2022, 'to achieve net zero emissions for all of our operating companies (Scope 1 and 2 in ❶)' and 'to create avoided CO_2 emissions of approx. 100 million tons (initiatives in ❷), together with establishment of "the GREEN IMPACT PLAN 2024", our action plan for 2022-2024.

*1 2020 energy-derived CO_2 emissions (Source: IEA)

*2 The emissions factor for the size of our contribution to reducing CO_2 is based on the 2020 emissions level.

❶ OWN IMPACT

We plan to achieve net zero emissions from all of our value chain (110 million tons[*3]), as well as a decarbonization effect on society[*4]. Net zero will be achieved for total emissions from our business activities (Scope 1, 2, and 3), including from our factories (Scopes 1 and 2) by fiscal 2031, for emissions in parts and materials production (Scope 3, Category 1), and for emissions in product use (Scope 3, Category 11). Efficient reduction of emissions can become the driving force behind our competitiveness.

*3 Fiscal 2021 actual results

*4 CO_2 emissions factor for electricity can be turned positive through advances in decarbonization at various electric power suppliers.

❷ CONTRIBUTION IMPACT

In our present business fields, we plan to contribute 100 million tons or more in avoided emissions from society and our customers. We plan to visualize avoided emissions by each product and service, for example, by promoting wider use of environmentally friendly vehicles through improvements in the performance and cost of automotive batteries, by replacing fossil fuels in towns and at homes with heat pump water heaters that use electricity, and by providing optimized solutions for inventory and transport to business flow of customers from material procurement to market supply. This visualization of emissions will be employed as a benchmark shared with society at large. Additionally, we plan to make investments in fields where contributions can be made and to boost our competitiveness, in order to grow our business and increase our contribution.

❸ FUTURE IMPACT

We plan to achieve avoided emissions of 100 million tons or more by creating new technologies and business fields.

+ INFLUENCE

Through communications related to PGI initiatives, we plan to have positive ripple effects on reforms in the energy supply and demand for the society as a whole and decarbonization through changes of demands and behaviors of customers, other business operators, as well as governments and investors. Although the direct impact on reduction cannot be calculated at present, we will move forward in this direction, being convinced that this is part of our mission to build a carbon neutral society as quickly as possible.

Environmental Action Plan "GREEN IMPACT PLAN 2024"

As milestones in reaching the 2050 targets set in "the Panasonic GREEN IMPACT", our long-term environmental vision, we set out the fiscal 2031 target linked to our groupwide business strategy, and formulated "the GREEN IMPACT PLAN 2024 (GIP 2024)", the three-year environmental action plan from fiscal 2023 to fiscal 2025, for which we are working on. Under GIP 2024, we have set out the fiscal 2025 targets for OWN IMPACT: CO_2 emissions reduction across our entire value chain (VC) (Scopes 1, 2 and 3), CONTRIBUTION IMPACT: contribution to avoided CO_2 emissions in society and the resource/circular economy (CE) as our materiality issues.

In OWN IMPACT, we plan to cut down CO_2 emissions from our entire VC of 110 million tons in fiscal 2021 to 16.34 million tons in fiscal 2025 and to 31.45 million tons in fiscal 2031 respectively with our business growth. In our plan to achieve net zero CO_2 emissions in our factories ('Zero-CO_2 factories') for all of our operating companies by fiscal 2031 under the drive to achieve net zero emissions from our business activities (Scopes 1 and 2), we are planning to achieve net zero CO_2 emissions at 37 factories by fiscal 2025.

In CONTRIBUTION IMPACT, we plan to achieve avoided emissions of 93 million tons* in fiscal 2031 and 38.3 million tons in fiscal 2025*. It must be noted that international standardization of the method to calculate 'the avoided CO_2 emissions' for which the Panasonic group is involved, is underway. If the calculation method to be standardized is different from the method our Group has adopted, we plan to explain the difference and at the same time revise our targets accordingly to achieve them.

There are three areas of resources/CE activities. One is maintaining the global waste recycling rate consistently at 99% or more, aiming at reaching zero emissions for factory wastes. The second is the amount of recycled resin used that we would double the quantity in three years to 90,000 tons over the result of the preceding medium-term plan (GP2021; 43,300 tons from fiscal 2020 to fiscal 2022). The third is the CE business model aimed at effective utilization of resources and maximization of customer that will be rolled out in a total of more than 13 businesses by fiscal 2025.

Additionally, we plan to continue working on the issues of 'biodiversity', 'water', 'chemical substances', 'local communities', and 'compliance', paying attention to the scale of social issues and empathy with our customers and society and corresponding to our business fields and regional characteristics and needs.

* Calculated with emissions factor at the time of the PGI establishment (IEA 2021)

Status of the first year of GIP 2024

CO_2 emissions for our entire value chain (VC) increased to 129.21 million tons (negative in OWN IMPACT) with increase of 21.70 million tons from 107.51 million tons in fiscal 2021.For the Scopes 1 and 2, there had been progress in both energy conservation and energy recycling, with 31 Zero-CO_2 factories and CO_2 reduction of 0.36 million tons. For the Scope 3, the reduction volume increased for product use (increase of 9.1 million tons) and other categories, thanks to expansion in the scope of business fields.

On the other hand, avoided emissions for our customers and society increased to 37.23 million tons, because of, in part, progress of new visualization of CO_2 emissions. In the area of resources/CE, the waste recycling rate was maintained at 99.1% globally, with recycled resin use at 12,400 tons. As four new CE business models were started up, total 10 CE business models are now in operations.

GREEN IMPACT PLAN 2024 (Fiscal 2025, 2031 targets and Fiscal 2023 actual results)

Item				Fiscal 2023 actual results (GREEN IMPACT PLAN 2024)	Fiscal 2025 targets (GREEN IMPACT PLAN 2024)	Fiscal 2031 targets
Material issues	CO_2 / Energy	**OWN IMPACT** Emissions reduction in our own Value Chain*2		**– 21.70 Mt (9.39 Mt)***6	**16.34 Mt**	**31.45 Mt***7
		Scopes 1 &2*1	Zero- CO_2 factories	Total 31 factories	Total 37 factories	
			CO_2 reductions	**0.36 Mt**	**0.26 Mt**	
		Scope 3*1 (Category 11)	CO_2 reductions in use of our products by customers	**– 9.1 Mt**	**16.08 Mt**	
		CONTRIBUTION IMPACT Avoided Emissions for society*3		**37.23 Mt**	**38.30 Mt**	**93.00 Mt**
	Resources/ CE* *Circular Economy	Factory waste recycling ratio*4		99.1%	99.0%	
		Recycled resin used*5 (Fiscal 2023 to 2025 total for GIP2024 targets)		12,400 tons	Fiscal 2023 to 2025 total 90,000 ton	
		Circular economy business models and products (Total)		10 businesses	13 businesses	
Continuing challenge	Biodiversity	Reducing and restoring the impact of business activities on the ecosystem to become nature positive Procurement of sustainable raw materials, businesses that contribute to biodiversity green spaces, and products and services that contribute to biodiversity				
	Water	Reduce water consumption in business activities and products/services				
	Chemical substances	Reducing the environmental impact of chemical substance's business activities and products				
	Local communities	Promote environmental initiatives to contribute to local communities and educate the next generation				
	Compliance	Ensure compliance with environmental laws and regulations				

*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 CO_2 emissions after introduction from the lifetime CO_2 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 Includes Scope 1,2 and Scope 3 Category 11, plus increases or decreases in Category 1 (procurement), Category 12 (disposal), and other indirect emissions. Figures in parentheses indicate the case where fiscal 2021 (starting point) is calculated with the same boundary as the fiscal 2023 target.
*7 The CO_2 emissions factor for electricity calculated with the IEA World Energy Outlook's 2° C scenario.

GIP2024: Points of change in fiscal 2023

CO_2 emissions (upper part of the figure)

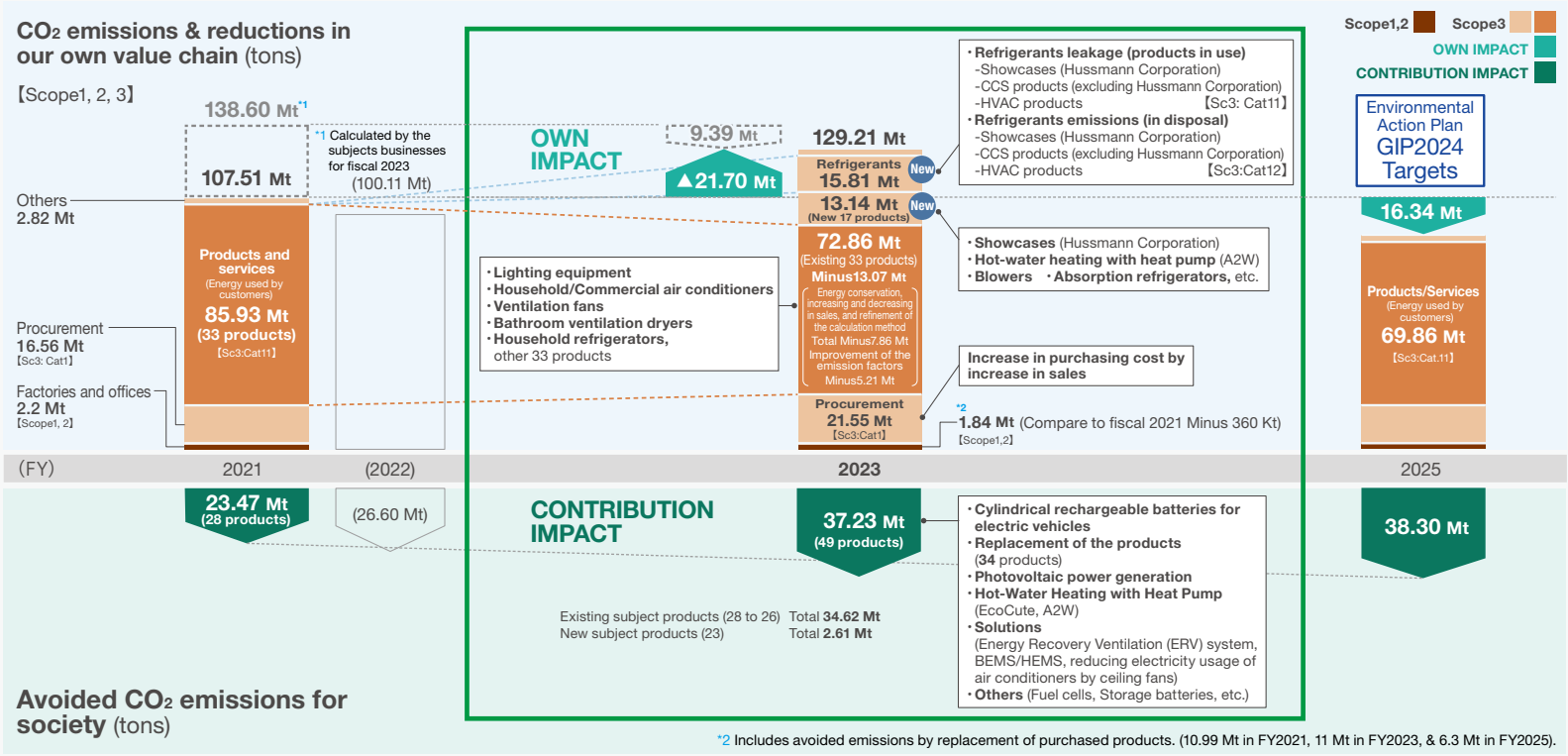
The CO_2 emissions in product use (Scope 3, Category 11) that accounts for approximately 80% of total value chain emissions, decreased from 85.93 million tons for 33 products in fiscal 2021 to 72.86 million tons (reduction of 13.07 million tons) in fiscal 2023, thanks to the improved energy efficiency of our products, increase and decrease in sales, refinement of the calculation method, and the emissions factor turning positive. On the other hand, to expand the scope of our responsibilities and contributions of the Panasonic group, we newly visualized 13.14 million tons in the CO_2 emissions from 17 more businesses. Regarding Refrigerant related equipment of HVAC Company and Cold Chain Solutions Company aiming to reduce CFC emissions of their product use by wider use of refrigerants with low environmental impact (CO_2 refrigerant/ propane) and wider-scale recovery of refrigerants disposed of by customers, we have added estimated refrigerant-related emissions after their visualization (total of 15.81 million tons). Together with an increase in procurement amount (increase of 5 million tons), the CO_2 emissions of 107.51 million tons in fiscal 2021 rose to 129.21 million tons in 2023, i.e. an increase of 21.70 million tons (negative in OWN IMPACT). However, if the new emissions boundary for fiscal 2023 is applied to the fiscal 2021, the volume indicates an improvement of 9.39 million tons from the point of the new emissions boundary. We will continue to actively work to improve accuracy by reviewing the boundary and method of calculation for Scope 3.

Avoided CO_2 emissions (lower part of the figure)

For avoided emissions ( ) to society and customers, the number of visualization of the subject business has increased from 28 businesses in fiscal 2021 to 49 in fiscal 2023. Total reached 37.23 million tons is approaching the fiscal 2025 target of 38.3 million tons. Contributions have hugely increased from 26 businesses that have been visualized up to now (28 as of fiscal 2021). At the same time, new 23 more businesses have been visualized (total 2.61 million tons) and their PDCA cycle based activities have begun.

The Panasonic GREEN IMPACT(PGI) serves as a benchmark for achieving carbon neutrality through the accumulation of each diligent effort (ACT) together with society, by addressing both our responsibility and opportunity in the urgent need to stop global warming. Since 'CO_2 emissions' and 'avoided CO_2 emissions' differ in its concept and objectives, our responsibility (CO_2 emissions) cannot be canceled out by contribution to customers (avoided CO_2 emissions). We believe that firstly we should understand their relationship is inextricable as they linked to each other and, then, should accelerate respective initiatives. In particular, as for 'the avoided CO_2 emissions', the flexibility of conditions for its calculation is high, and it has not been internationally standardized as of now. Although there are so many practical issues that need to be addressed before 'the avoided CO_2 emissions' can serve as a social benchmark, we plan to report on the progress of the PGI as a whole, employing 'the avoided CO_2 emissions' as an indicator to show the acceleration in reform and growth, by enhancing our competitiveness in electrification, energy conservation, energy conversion, resources recycling, etc., and contributing to the early achievement of the decarbonization scenarios.

GREEN IMPACT PLAN2024 (GIP2024) Points of change in fiscal 2023



Avoided CO_2 Emissions

The CONTRIBUTION/FUTURE IMPACT of Panasonic GREEN IMPACT, commonly referred to as the avoided emissions, is an indicator of the value of the amount of CO_2 emissions contributed to the reduction of CO_2 emissions by customers and society by introducing our group products and services, compared to the amount not introduced (baseline). In fiscal 2023, CONTRIBUTION IMPACT totaled 37.23 million tons in 49 businesses covering products and services sold in the same year. Most of this is in the living business, which includes air conditioners and lightings, and the energy business, which includes EV rechargeable batteries, accounting for about 50% of Group sales. Our group's main business is to provide electrified products and services (electrical and electronic equipment) by converting to electric appliances that are more efficient in energy use than those that use fossil fuels, we are able to reduce CO_2 emissions. The widespread use of electric appliances will increase demand for electricity, but by continuously increasing the efficiency of energy use in appliances and spaces, and by controlling and optimizing demand through energy storage and energy management, we will reduce the load on grid power in each region and promote renewable energy.

On the other hand, although there is no internationally uniform standard for the avoided emissions (as of August 2023), our company has participated in WBCSD*1, IEC*1, and the GX League*1, and has worked with like-minded government departments and companies to promote dialogue on the need for the avoided emissions. In March 2023, the WBCSD and the GX League released guidance and guidelines on the avoided emissions*2, and we are working on a calculation based on these guidelines in conjunction with discussions at the IEC*3, which aims to achieve international standardization. The baseline (comparison target) is the period of use (durable life, etc.) of our group products and services compared to the market average condition expected for each business, and the annual electricity consumption in terms of design and calculated rationally under conditions judged to be objectively reasonable after discussions within the Panasonic Group. The basic structure of the calculation formula is as follows: activity volume (sales volume, etc.) × annual reduction per activity volume (difference in energy consumption compared to baseline, etc.) × duration (lifespan, etc.) × CO_2 emission factor. This calculation method and the data on which it is based have been verified by a third party, and this is our group's first disclosure in this report.

The concept and purpose of use of these two indicators are very different. The emissions cannot be offset by "avoided emissions (reduction contribution to customers)". The emissions reduction is the company's responsibility. Our mid-term to long-term reduction targets are certified as SBTs 1.5 degree targets*4 in May 2023. Panasonic group aims to realize a decarbonized society early by accelerating the PDCA cycle of both responsibility and contribution.

*1 World Business Council for Sustainable Development (WBCSD), International Electrotechnical Commission (IEC), GX League is a forum for cooperation between a group of companies, the government and academic institutions in order to meet greenhouse gas reduction targets and increase industrial competitiveness by using Japan's goal of carbon neutrality by 2050 as an opportunity for economic growth.
*2 "Avoided Emissions Guidance" by WBCSD, "Basic Guidelines for Disclosure and Evaluation of Opportunities for Climate Change" by GX League
*3 IEC63372 ("Avoided CO_2 emissions" international standard to be issued in 2024.)
*4 Companies play their part in combating climate change by setting GHG emissions reduction targets that are aligned with reduction pathways for limiting global temperature rise to 1.5°C or well-below 2°C compared to pre-industrial temperatures. These targets are termed science-based targets (SBTs).

For further examples of our avoided emissions products that contribute to CO_2 reduction for consumers and society, see the following website.

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

CONTRIBUTION IMPACT

[Unit: ton] Calculation example : See the following pages for further examples.

Category	Top 20 businesses in FY 2023
Electrification **9.70** million in FY 2021 ↓ **4** businesses **17.79** million	**Cylindrical Rechargeable Batteries for EVs** Calculation example
	Hot-Water and Heating Systems with Heat Pump (A2W) Calculation example
	Electric-assist Bikes
	Hot-Water Systems with Heat Pump (EcoCute) Calculation example
	Total **4** businesses: **17.79** million
Replacements Calculation example (Home appliance) **10.99** million in FY 2021 ↓ **34** businesses **11.00** million	**Household Air Conditioners**
	LED Lightings
	Household Refrigerators
	Electric Showers / Electric Water Heaters
	Commercial Air Conditioners
	Washing and Drying machines
	Projectors
	LCD TVs
	CO_2 Freezers
	Dryers
	Total top **10** businesses: **10.29** million
Solution **4** businesses **2.42** million	**Heat Exchange System** Calculation example
	Ceiling Fans
	BEMS*1 / HEMS*2
	Total top **3** businesses: **2.31** million
Others Calculation example **7** businesses **6.01** million (Vacuum Insulated Glasses) (Home Delivery Communication Boxes)	**Photovoltaic Power Generation Systems**
	Fuel Cells
	Creation and Storage Collaboration System (Storage batteries)
	Total top **3** businesses: **5.96** million
Total all 49 products and services: ★37.23 million	

*1 Building Energy Management System
*2 Home Energy Management System

Electrification

Hot-Water and Heating Systems with Heat Pump (EcoCute, A2W[*1])

*1 A2W: Air to Water

Product life stages subject to avoided CO_2 emissions

Raw materials > Manufacturing > Transportation > **Use** > Disposal/Recycle

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

■Overview

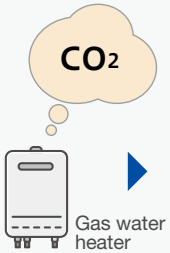
A heat pump is equipped with electrification technology that captures heat energy from the ambient air and transfers it to heat water or air utilizing the characteristic that temperature changes when gas is compressed or expanded. With the technology, the equipment with heat pump is 2.4 to 4.3 times 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 CO_2 is always emitted from gas equipment in combustion of city gas, we will contribute to accelerate the transition to a decarbonized society.

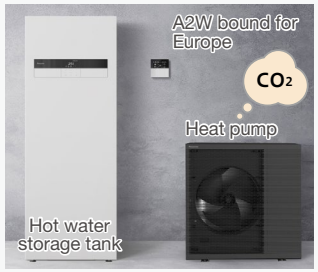
*2 Our own calculation based on information in METI's 'Top Runner Program'.

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

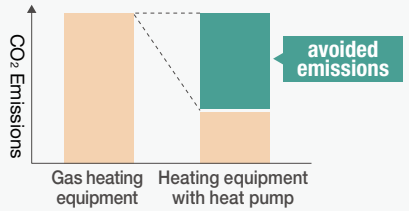
■Avoided CO_2 emissions mechanism

Compared to the average hot-water and heating systems with gas combustion type that are water heaters widely available in markets, our heating equipment with heat pump with equivalent capacity emit less CO_2 from the electricity used throughout their lifetimes, therefore, the difference of CO_2 emissions becomes avoided emissions.





Average CO_2 emissions from water & air heating energy by one gas heating equipment and one heating equipment with heat pump (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

[Amount of activities] (Units)
The number of units that replaced existing gas heating equipment in the total annual sales volume[*3]

× (Annual city gas consumption per gas heating equipment (m^3) × City gas CO_2 emission factor (kg CO_2 /m^3)

− Annual power consumption per unit of the heating equipment with heat pump (kWh) × Electric power CO_2 emission factor per sales region (kg CO_2 /kWh)) × Period

*3 Japan: Approximately 70% of sales are heating equipment with heat pump replacing gas heating equipment. (Source: Industrial association data).
Europe: 100% of sales are heating equipment with heat pump replacing gas water heaters.
(We deemed that the replacement of existing A2Ws can be ignored as the sales started in 2008.)

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

- **Electric power** CO_2 emission factor: Japan - **0.487** kg/kWh, and Europe - **0.277** kg/kWh (Source: IEA 2021)
- **City gas** CO_2 emission factor: **2.240** kg/m^3 (Source: Document by Ministry of the Environment)

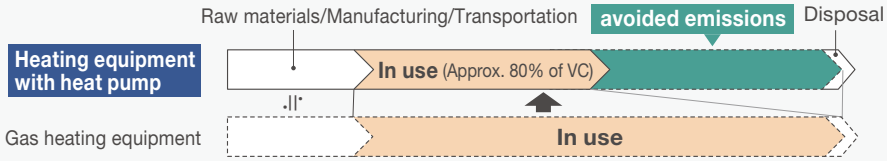
■Baseline (Subject to comparison)

CO_2 emissions from gas combustion to capture heat energy required for heating the same amount of water or air. 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.)

■Coverage of quantification (Way of thinking and its rationalization)

When the heating equipment with heat pump is in use. We deemed that CFP[*4] of the equipment when it is in use can be ignored because both of a heating equipment with heat pump and a gas heating equipment show a relatively greater CFP when they are use.[*5]

*4 CFP (Carbon Footprint of Products): CO_2 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).
*5 79.9% for 'in use' of CO_2 emissions in the value chain (VC) of the Panasonic heating equipment with heat pump. (FY2020 Panasonic actual result)



*4 **CFP** (Carbon Footprint of Products): CO_2 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).

■Amount of activities

EcoCute: The number calculated by the following equation: the annual sales volume in Japan x 70%[*6] which is the replacement ratio of gas heating equipment with heating equipment with heat pump. (Unit)

*6 Data from a Japanese industrial association. The calculation excludes the number of replacements of an end-of-life EcoCute with a new unit.

A2W: The number of annual sales of A2W in Europe (Unit)[*7]

*7 We deemed that replacement ratio of old A2Ws with new ones can be ignored as the sales started in 2013.

■Avoided CO_2 emissions per unit of amount of activities (Basic unit)

Regarding the annual energy consumption used for the same amount for heating water or air, which was converted to CO_2 emissions, difference between those of heating equipment with heat pump and gas heating equipment.

■Period (Flow method: Include entire lifetime CO_2 emissions of the product in its first sales year)

- The holding years for repair parts
- CO_2 emissions reduction effect continues during that period.

Electrification

Cylindrical rechargeable batteries for electric vehicles (EV)

Product life stages subject to avoided CO_2 emissions

Raw materials > Manufacturing > Transportation > **Use** > Disposal/Recycle

Sales regions: **North America**

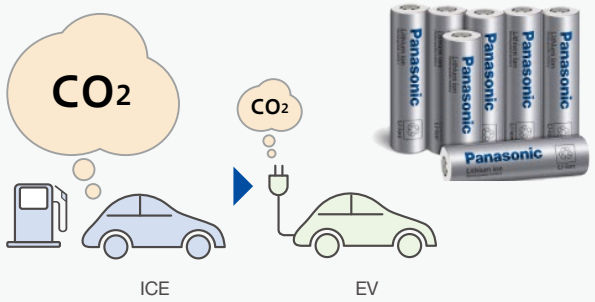
■Overview

Transition of use from internal combustion engine vehicles (ICEVs) to electric vehicles (EVs) is expected to bring decarbonization of transportation sectors in the world as EVs do not directly emit CO_2 , in addition to their better energy efficiency[*1]. EVs, which does not use internal combustion engine, use a motor driven by electricity supplied from a rechargeable battery. Hence, it is recognized that the rechargeable battery that is equivalent to the fuel tank of an ICEV is one of the most important components in an EV.

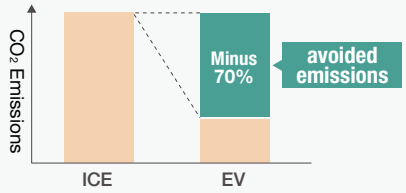
*1 Energy efficiency: The percentage of consumed energy that reaches to the wheels;
EV: **87–91**% ICEV: **16–25**%.
Source: Yale Climate Connections. August,2022 “Electrifying transportation reduces emissions and saves massive amounts of energy”

■Avoided CO_2 emissions mechanism

In the case that an EV and an ICE drives the same distance, the difference between the fuel consumption of an ICEV converted into CO_2 emission and the amount of electricity charged and discharged in an EV converted into CO_2 emission because of the high energy efficiency of the EV is avoided emissions.



Average CO_2 emissions from an ICEV and an EV
(U.S.) (EVs use the power grid)



■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] (Units)
The CO_2 emissions converted from the number of EVs of the battery capacity sold per year

$$\times \left(\underbrace{\text{CO}_2\text{ emissions per 1 km by an ICEV}}_{(\text{kg CO}_2/\text{km})} - \underbrace{\text{CO}_2\text{ emissions per 1 km by an EV}}_{(\text{kg CO}_2/\text{km})} \right) \times \text{Lifetime mileage}$$

Annual avoided emissions by one EV replacing an ICEV

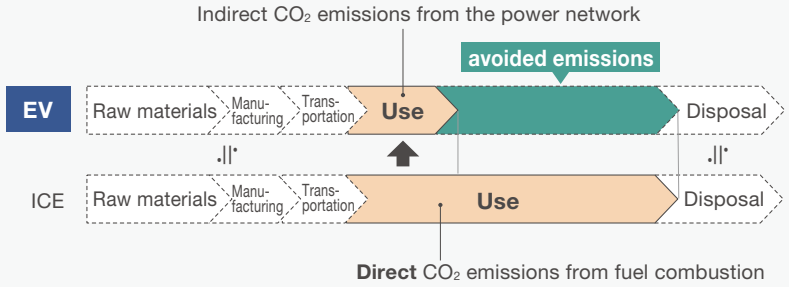
* Average annual mileage respectively in Japan, U.S. and Europe x 10 years

■Baseline (Subject to comparison)

CO_2 emissions from driving an ICEV

■Coverage of quantification (Way of thinking and its rationalization)

- Difference in CO_2 emissions between from ICEV and EV while driving.
- This case refers only to EV driving. CFP of the battery[*2] is calculated separately.



*2 **CFP** (Carbon Footprint of Products): CO_2 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).

■Amount of activities

CO_2 emissions converted from the number of EVs for the capacity of cylindrical rechargeable batteries for EVs sold per year. (unit)

■Avoided CO_2 emissions per unit of amount of activities (Basic unit)

Difference in CO_2 emissions between from an ICEV and an EV while driving 1km.

■Period (Flow method: Include entire lifetime CO_2 emissions of the product in its first sales year)

- Lifetime mileage of an EV (to indicate reduction effects of driving EVs)
- Lifetime mileage of an EV
  = Average annual mileage respectively in Japan, U.S. and Europe x Vehicle life (10 years)

■Avoided CO_2 emissions in fiscal 2023: 14.17 million tons

Replacements

Energy-saving effects from replaced home appliances

Product life stages subject to avoided CO_2 emissions

Raw materials > Manufacturing > Transportation > **Use** > Disposal/Recycle

Sales regions: **Japan, China, North America, Central and South America, Europe, Southeast Asia, Middle east, etc.**

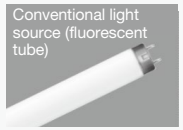
■Overview

Improving efficiency of energy consumed by a large number of home appliances now widely used throughout society will reduce the load of local grid power for the use of appliances, lower the hurdle to transform to use renewable energy as their energy source. This facilitates transition to decarbonization society from demand sides. One of the characteristics of home appliances with high durability is that their dominant stage of CO_2 emissions (CFP[*1]) in the life cycle is from energy use through the whole period in which product are used by customers and in society. This accounts for 80 to 90% of large home appliances such as lighting and refrigerators. Replacing the product used enough of the life with a new product that has equivalent function and performance in use together with improved energy efficiency will cause effect of reducing CO_2 emissions both from users and power suppliers.

■Avoided CO_2 emissions mechanism

Regarding the home appliance whose life is passed and replaced with a new product with equivalent functions, the difference between CO_2 emissions equivalent to the energy saved in the product's lifetime use before and after its replacement is avoided emissions.

Example of lighting equipment



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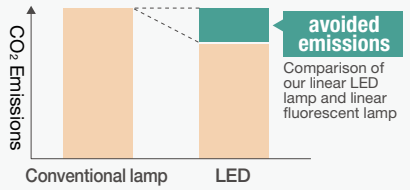
Approx. 60% less energy consumed by a new product with higher brightness compared to those of conventional fluorescent lamps.

Integrated LED Base Light 'iD Series'
General facilities General-purpose model (Energy-saving light bar)
Direct mount XLX450DHNU LE9 Daylight white (5000 K)
https://www2.panasonic.biz/jp/lighting/facilities/baselight/id/general.html

[Example] Average lifetime CO_2 emissions from consumed power before and after single unit replacement



■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] (Number of units)
The number of units sold per year[*2]

× (Annual power consumption of the product before replacement (kWh) − Annual power consumption of the product after replacement (kWh))

× CO_2 emission factor for electricity per sales region (kg CO_2 /kWh)

× Period (7 to 10 years depending on the product)

= Annual avoided emissions from energy-saving effect by one replaced product

[*2] 'Before replacement' refers to the average penetration status of existing products that can be replaced with a new product with equivalent functions and performance at the time of the sale, per region. The amount of activities was broken down according to each situation and then totaled.

CO_2 emission factors for electricity
(Source: IEA2021)
Unit: kg/kWh

Regions	Factors
Japan	0.487
Europe	0.277
North America	0.383
China	0.623
India	0.723
Asia and Pacific	0.386
Latin America	0.252
Middle East & Africa	0.616

■Baseline (Subject to comparison)

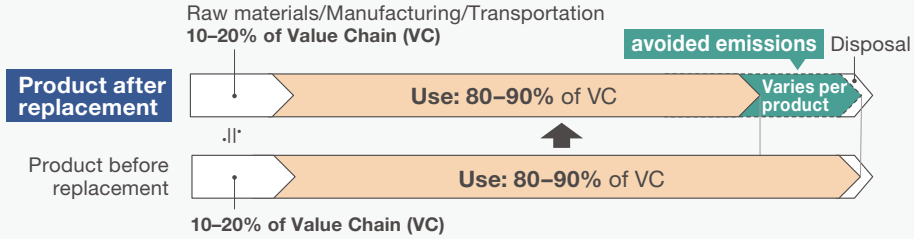
CO_2 emissions converted from lifetime power consumption of the average product in markets at the penetration rate of the product with functions and performance equivalent to the new product per sales region[*3].

[*3] Example: LED penetration rate per country, and the like.

■Coverage of quantification (Way of thinking and its rationalization)

When LED is in use. The average CFP of home appliances are dominant[*4] 'in use'. We deemed that we can ignore the impact from the CO_2 emissions difference between those from the products before and after the replacement.

[*4] 'in use' accounts for approx. 80 to 90% of CO_2 emissions in the home appliances value chain.



■Amount of activities

The number of annual sales depending on the status (penetration rate, etc.) per sales region for the new product.

■Avoided CO_2 emissions per unit of amount of activities (Basic unit)

Difference between CO_2 emissions converted from lifetime power consumption[*5] between those from the products before and after replacement in each sales region.

[*5] Example: Rated power in design x annual 'time in use' etc.

■Period (Flow method: Include entire lifetime CO_2 emissions of the product in its first sales year)

- This was set by product, which can maintain holding a spare parts (7–10 years), optimum operational period for basic performance etc.
- CO_2 emissions reduction effect continues during the period.
- We deemed that 7 to 10 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 CO_2 emissions reduction effects are also expected because of efficient utilization of resources

[*1] **CFP** (Carbon Footprint of Products): CO_2 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

Heat Exchange System

Product life stages subject to avoided CO_2 emissions

Raw materials > Manufacturing > Transportation > **Use** > Disposal/Recycle

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

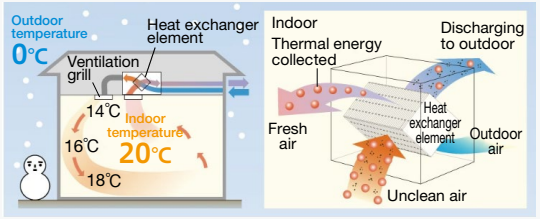
■Overview

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. The heat exchange system reduces heat loss from the interior of buildings and provide comfort maintaining appropriate air quality at the same time. The heat exchange 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, the exchange heat 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 CO_2 emissions mechanism

CO_2 emissions converted from the reduced amount of power or fuel consumption by adopting this heat exchange system in room spaces under the same conditions compared to those from average ventilation method for ventilation in the market.

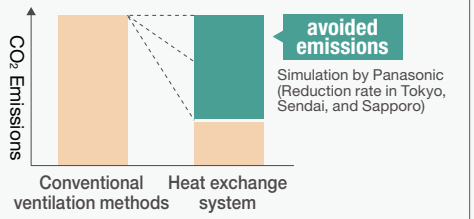
How the heat exchange system works (winter)



* Efficiency varies according to model.

WEB https://sumai.panasonic.jp/air/kanki/kodatekicho/

CO_2 emissions converted from energy consumption with adjusted heat loss from ventilation



Simulation by Panasonic (Reduction rate in Tokyo, Sendai, and Sapporo)

WEB https://sumai.panasonic.jp/air/kanki/kabekakefan/

■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]
Annual system installation volume (The number of heat exchange systems)

× (**Annual energy consumed by air conditioning in a residential house with conventional ventilation methods (volume of thermal loss)** (kWh or liters) × **CO_2 emission factors by electricity or fuel type in each sales region** (kg CO_2 /m³)

− **Annual energy consumed by air conditioning in a residential house with a heat exchange system (volume of thermal loss)** (kWh or liters) × **CO_2 emission factors by electricity or fuel type in each sales region** (kg CO_2 /kWh or liters))

= **Annual avoided emissions by installed one heat exchange system** × Period

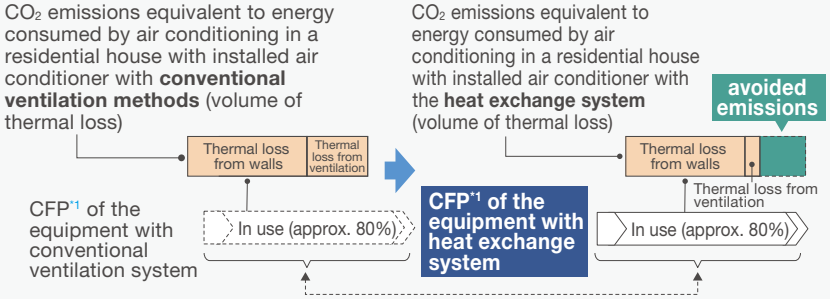
- CO_2 emission factor for **electricity**: **0.487** kg/kWh in Japan, **0.623** kg/kWh in China, **0.383** kg/kWh in North America, and **0.277** kg/kWh in Europe (Source: IEA 2021)
- CO_2 emission factor for **kerosene**: **2.49** kg/liter (Source: Data from Ministry of the Environment)

■Baseline (Subject to comparison)

CO_2 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 (Way of thinking and its rationalization)

Difference 'in use' . 'in use' account for the dominant (approx. 80%) of the CFP*1 of ventilators,, and effects from other than 'in use' are equivalent with other ventilators. Hence, we deemed that their CFPs when not 'in use' can be ignored.



*1 **CFP** (Carbon Footprint of Products): CO_2 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).

■Amount of activities

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

■Avoided CO_2 emissions per unit of amount of activities (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 CO_2 emission factors for electricity or fuel*2 by each sales region.

*2 Kerosene was used as the fuel.

■Period (Flow method: Include entire lifetime CO_2 emissions of the product in its first sales year)

- Design life of the heat exchange system
- CO_2 emissions reduction effect continues during the period.

Others

Vacuum Insulated Glass

Product life stages subject to avoided CO_2 emissions

Raw materials > Manufacturing > Transportation > **Use** > Disposal/Recycle

Sales regions: **Japan**

■Overview

One effective means of achieving decarbonization in the consumer and business sectors is through reducing the air conditioning load at spaces in residential houses and offices by maintaining stable room temperatures through improvement of building insulation. According to our estimation, heat loss through the windows in all heat loss in an average detached house in Japan accounts for 30 to 40%. 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.

■Avoided CO_2 emissions mechanism

VIG shows significantly higher thermal insulation compared to those of single-pane glass and Low-E multi-pane glass.*1 CO_2 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.

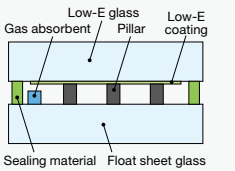
Vacuum Insulated Glass (VIG)

*1 The overall heat transfer coefficient, or U-value

1/4 of multi-pane glass

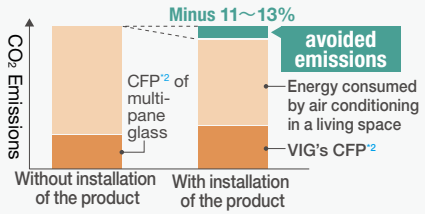
VIG: 0.7 w/ m²·k

Multi-pane glass: 2.9 w/ m²·k



Vacuum insulated glass structure

Comparison of CO_2 emissions from energy consumed by air conditioning in a residential house with/without VIG windows, taking account of the glass's CFP.*2



■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] (m²)
Amount of VIG sold per year

× (Power consumed by air conditioning in a residential house with single-pane or Low-E multi-pane glass*3 per year (kWh/ m²) − Power consumed by air conditioning in a residential house with VIG*3 per year (kWh/ m²))

× CO_2 emission factor for electricity (kg CO_2 /kWh) × Period (Design life)

CO_2 emission factor for electricity Japan **0.487** kg/kWh (Source: IEA 2021)

Annual avoided emissions achieved by installation of 1 m² of VIG

− (VIG's CFP*2, *4 (kg CO_2 / m²) − Single-pane or Low-E multi-pane glass's CFP*2,*4 (kg CO_2 kWh/ m²))

*3 Calculated based on our simulation using data from the Architectural Institute of Japan.

*4 Calculated based on data from the Flat Glass Manufacturers Association of Japan, by Panasonic.

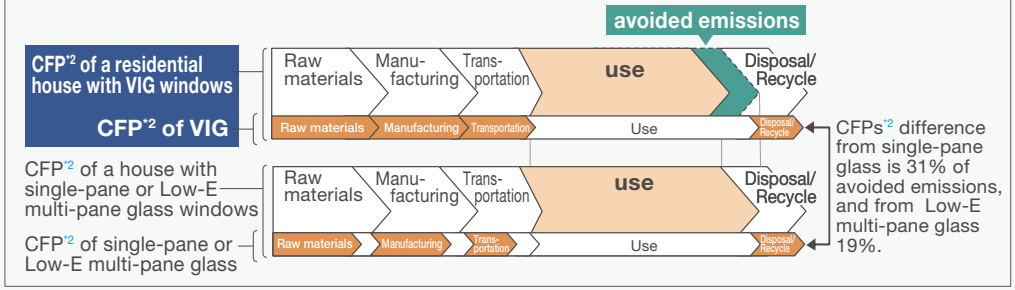
■Baseline (Subject to comparison)

CO_2 emissions converted from electricity consumed by air conditioning operations in the entire space of a 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 (Way of thinking and its rationalization)

- In use: CO_2 emissions derived from electricity consumed by air conditioning in an entire residential house.
- Glass's CFP*2: VIG's CFP*2 is greater than that of single-pane or Low-E multi-pane glass, however, there are no CO_2 emission from the glass in use.
  The difference between the CFPs*2 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.



■Amount of activities

Amount of VIG sold per year (m²)

■Avoided CO_2 emissions per unit of amount of activities (Basic unit)

- In use: Differences in electricity consumed by air conditioning in residential houses per different type of glass.
  * 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*2 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 CO_2 emissions of the product in its first sales year)

- Design life of VIG.
- CO_2 emissions reduction effect continues during the period.
- We deemed that the CO_2 emissions effects over the design life of VIG are conservative estimates as the glass could be used as long as the life of a residential house in Japan, which is generally longer than the glass life.

*2 **CFP** (Carbon Footprint of Products): CO_2 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

Home Delivery Communication Box

Product life stages subject to avoided CO_2 emissions

Raw materials > Manufacturing > Transportation > **Use** > Disposal/Recycle

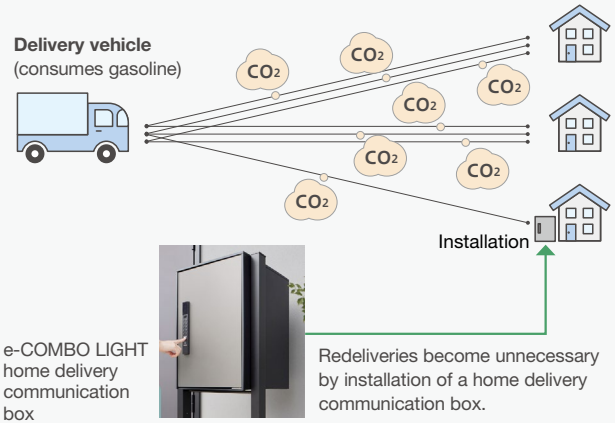
Sales regions: **Japan**

■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 CO_2 emissions from energy consumption such as fuel for deliveries, which contributes to reduction of load in local distribution networks and decarbonization.

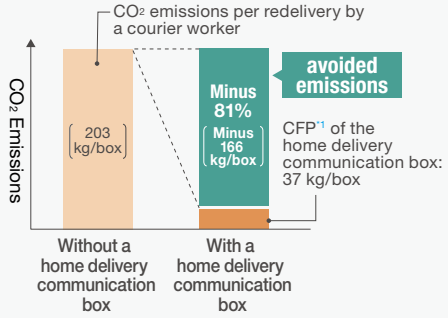
■Avoided CO_2 emissions mechanism

Reduction of CO_2 emissions from energy consumption (combustion of fossil fuel such as gasoline) required for courier workers to redeliver goods, by avoiding redeliveries.



CO_2 emissions with and without one home delivery communication box

(CO_2 emissions from a vehicle on redelivery by the courier worker and CFP[*1] of the home delivery communication box)



■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] (Units)
The number of home delivery communication boxes sold per year.

Avoided emissions per vehicle per redelivery (0.46 kg/redelivery) × Annual number of redeliveries (29.5 times/year) × Period (Design life of the product) − CFP[*1] of a home delivery communication box (37.0 kg/box)

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

* Verified data by Panasonic

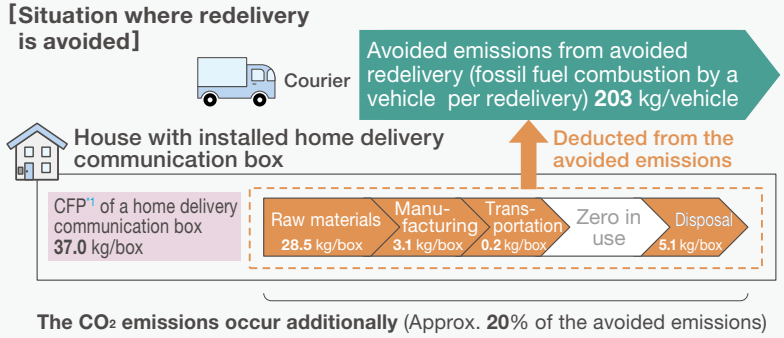
* Estimated by Panasonic

■Baseline (Subject to comparison)

CO_2 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 (Way of thinking and its 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 CO_2 when it is in use, the CFP[*1] 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.



The CO_2 emissions occur additionally (Approx. **20**% of the avoided emissions)

■Amount of activities

The number of home delivery communication boxes sold per year

■Avoided CO_2 emissions per unit of amount of activities (Basic unit)

- Avoided emissions per redelivery: **0.46** kg (Source: Verified data by MLIT)
- The number of redeliveries: **29.5** times/year
  (Source: Verified data by Panasonic; actual measurement results obtained from 103 households in Awara City, Fukui Prefecture over 4 months)

■Period (Flow method: Include entire lifetime CO_2 emissions of the product in its first sales year)

- Design life of a home delivery communication box.
- CO_2 emissions reduction effect continues during the period.
- We deemed that the design life of the home delivery communication box is a conservative estimate for CO_2 emission effects as the box's life can be extended further with appropriate use and maintenance.

*1 **CFP** (Carbon Footprint of Products): CO_2 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).

Initiatives for Avoided CO_2 Emissions

Under the GHG Protocol, it is possible to calculate CO_2 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 avoided emissions, as of now, the avoided emissions is not well recognized by society and no uniformed standard for the avoided emissions has been established. Therefore, it is a must to prepare an environment where the corporation's contribution to decarbonization is appropriately evaluated to further encourage corporate efforts (technological development and innovation) and thereby accelerate such activities to achieve carbon neutrality.

Our environmental vision, Panasonic GREEN IMPACT (PGI), sets out the CO_2 emissions reduction targets not only for our company but also for society as a whole. It is important for companies and financial institutions who share the same goals to work together to spread significance of the avoided emissions as 'a standard measurement' to evaluate the corporation's contribution to decarbonization efforts and increase recognition of the avoided emissions. Therefore, we are currently implementing the following activities regarding the avoided emissions towards its global standardization, increase of its recognition and making the avoided emissions well known.

Standardization

International Electrotechnical Commission (IEC)

In March 2023, activities of standardization of a new IEC standard started with Japan's proposal. The activities includes calculation of the avoided emissions from new technologies, such as AI, IoT, and a digital twin; providing requirements for calculation methods; and establishment of requirements for communications and information disclosure. The members have been working on the finalized standard to be published in 2024 as "IEC63372: Quantification and communication of GHG emissions and emission reductions/ avoided emissions from electric and electronic products, services and systems - Principles, methodologies, and guidance". The Panasonic Group members has been involved in the above activities since their initial stage.

World Business Council for Sustainable Development (WBCSD)

WBCSD is a global organization with members of some 200 forward thinking companies who aim at sustainable development; the members are collaborating each other to contribute to transformation to sustainable society. Endorsing the principles of WBCSD, Panasonic Holdings Corporation (PHD) became a member of WBCSD in 2022 to accelerate the Panasonic Group's PGI activities. We participated in creating 'the Guidance on Avoided Emissions' which was published in March 2023. Now, we are working to revise the guidance.

Panasonic Holdings Joins WBCSD (World Business Council for Sustainable Development)
https://news.panasonic.com/global/press/en221007-2

GX League*

Six leading companies in the GX League, including PHD, along with 73 league members, participated in the GX Business Working Group (hereafter, GXBWG) for 'rulemaking to create markets' that is one of activities of GX league. GXBWG announced 'the Guidance on Avoided Emissions' in March 2023 to establish an appropriate system to evaluate CO_2 emissions and the like by the products and services Japan's companies provide to markets towards achieving global carbon neutrality. In 2023, GX League published 'the Guidance on Avoided Emissions'.

* 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 who 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

Promotion of avoided emissions in international events

Global Green Transformation Conference

In the Global Green Transformation Conference 2022 (GGX 2022) held by Japan's METI in October 2022, we advocated the significance of the avoided emissions to appropriately evaluate companies' contribution to decarbonization and increase its global recognition.

Introduce a new corporate evaluation framework based on the contribution to decarbonization – GGX 2022
https://news.panasonic.com/jp/stories/13109

International Capital Market Association (ICMA)

'The annual Sustainable Bond Conference 2022' was held in November 2022, jointly hosted by the International Capital Market Association (ICMA) and the Japan Securities Dealers Association (JSDA). At this conference, based on the management policy to solve social issues through business activities, the Panasonic Group announced it would further increase its avoided emissions through the business, considering finding solutions for global environmental issues as urgent matters with the highest priority. Taking batteries for electric vehicles as an

example, we emphasized the significance of being valued for increase of avoided emissions because of the spread of eco-conscious vehicles (opportunity), not only from the viewpoint of controlling of increasing CO_2 emissions that would increase along with increase of production volume (=risks).

■ 2022 United Nations Climate Change Conference (COP27)

In November 2022, in a seminar at COP 27 with a theme of the avoided emission, the Panasonic Group gave presentation on the background and purpose of PGI, as well as the significance of the avoided emissions and related issues. With the other panelists, discussions were made on how to establish a standardized measurement method for the avoided emissions not to be considered 'Green Wash' i.e. a company superficially presents its environmentally responsible public image, while securing transparency and reliability Then, the discussion went on how companies would be evaluated in an opportunity for companies evaluation.

■ Consumer Electronics Show (CES) 2023

In the CES 2023 press conference held in January 2023, we explained that we were working on standardization of calculation methods of the avoided emissions through our participation in WBCSD and IEC, and called for joining to support the standardization.

Panasonic Group to showcase technologies and products that contribute to reducing CO_2 emissions and resolving environmental challenges at CES 2023
https://news.panasonic.com/global/press/en230105-4

Environmental Governance

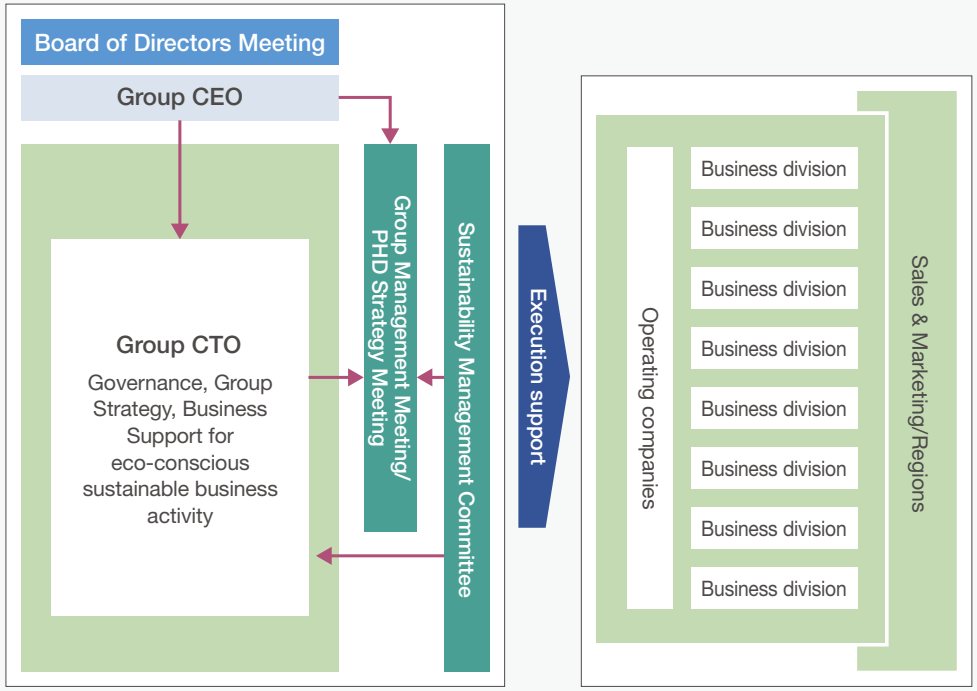
Promoting Group-wide Environmental Sustainability Management Centering on PDCA

Striving for the creation of a sustainable society, we are following our initiative under the Group Chief Technology Officer (CTO) (Tatsuo Ogawa Executive Officer, as of April 2022) and working to fulfill our corporate social responsibility through eco-conscious business activities as well as resolve environmental issues such as climate change, resources, water, etc. through our products and services. The Panasonic Group formulates its annual environmental management policy in accordance with the Group's management policy, "Panasonic GREEN IMPACT"—our long-term environmental vision announced in fiscal 2023, our Environmental Action Guidelines and the GREEN IMPACT PLAN 2024—our environmental action plan. Our environmental policy is shared annually across the entire organization through the policy presentation led by the Group CTO, who is delegated authority by the Group CEO. Operating companies and business divisions establish their own environmental policies and targets based on the Group management policy and "Panasonic GREEN IMPACT", and plan and promote their activities accordingly. The progress and results of activities for the key environmental targets we pledged to society to achieve under the Environmental Action Plan, GREEN PLAN 2024 are examined and determined on the directions, issues, and particularly key measures in the Group Management Meeting where top management such as the Group CEO and presidents of the operating companies participate. Matters of special importance are deliberated on by the Board of Directors Meeting.

Panasonic GREEN IMPACT, our Group's long-term environmental vision as stated above, was put through this process and was released in April 2022. In promoting our environmental sustainability management activities in Panasonic Group, we have built a structure to promote implementation of such activities collaborating other departments in the entire Group through determination by the Sustainability Management Committee (established in December 2021) led by the Group CEO. For activities organized by theme, we have set up committees specifically for dissemination of our environmental policy and targets to all members of the Group without fail, deliberation on how to respond to issues, and chemical substances management used in our products. We started our Sustainable Management Promotion Consortium activities in September 2020 as opportunities for volunteers to resolve sustainability issues and integrating business growth, which are underway, building consultative reporting ties with the Sustainability Management Committee as mentioned above. (approx. 650 participants)

In principle, results of activities relevant to environmental targets are gathered and assessed on a monthly basis as environmental performance data, to identify the achievements, and additional measures are taken as needed. Feedback of annual performance data is given internally and disclosed externally after review, onsite audits, and independent assurance by a third-party. Moreover, reviews and feedback from stakeholders are utilized in subsequent measures to ensure further continuous improvement.

Promotion System of Environmental Sustainability Management in Fiscal 2023



* See page 5 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 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 all of our nonmanufacturing sites; in principle, 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.

Panasonic Automotive System Co., Ltd., 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. Because of the COVID-19 pandemic, training programs that took a group-based format in the past have held remotely since fiscal 2021. The remote training scheme has enabled employees who could not find sufficient time to attend the program to participate actively, resulting in highly effective training. Internal audits held by operating companies have been also conducting remotely, both preventing COVID-19 infection and improving site management.

Acquired status of the ISO 14001 Certification (as of March 31, 2023)

Region	Number of certifications obtained*1		Total
	Manufacturing	Non-manufacturing	
Japan	19	10	29
North America & Latin America	14	0	14
Europe & CIS	7	1	8
Southeast Asia, & Oceania	39	8	47
China & Northeast Asia	43	1	44
India, South Asia, Middle East & Africa	6	1	7
Total	128	21	149

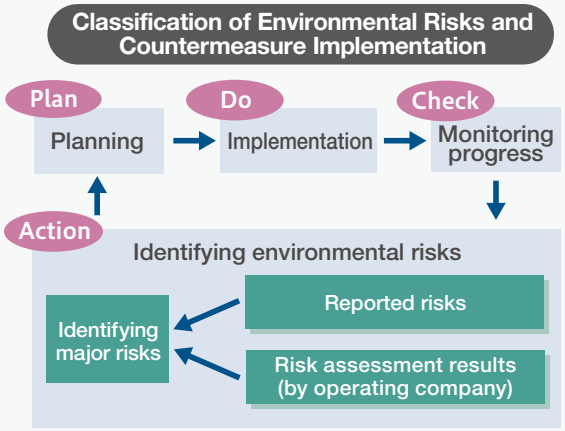
*1 The above number includes the one for integrated certification. The number of acquired status varies every year depending on the situation such as reorganization or closure of BDs, or promotion to acquire integrated certification.

PDF **Obtaining of ISO 14001 Certification**
https://holdings.panasonic/jp/corporate/sustainability/pdf/eco_isolist2022.pdf

Environmental Risk Management

Group-wide 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 pages 130-131), we promote (1) identification of environmental risks and group-wide risk management each year, and (2) 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 3 violations of environment-related regulations across the world in fiscal 2023. In response to the violation, we promptly reported the violation to the authority, and at the same time, implemented measures against the causes to fulfill the criteria. 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 2023

Region	Environmental pollution					Other	Total
	Air	Water quality	Noise	Odor	Waste	Permission / Approval	
Global (including Japan)	2	0	0	0	0	1	3
(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, a mechanism 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. Unfortunately, there were once again violations of the regulation regarding restricted substances in our products in fiscal 2023. We will take further action to ensure that our compliance management is comprehensive to prevent any recurrence.

Measures Against Soil and Groundwater Contamination and Air Pollution

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 anti-contamination 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 2023

Region	Number of sites that completed remedial measures	Number of sites currently taking remedial measures
Global (including Japan)	1	42
Japan	(1)	(37)

In addition to the above, Panasonic Group is implement measures for air pollution.

The efforts made in factories are 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 and particulate matter 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.

WEB https://www.panasonic.com/global/corporate/sustainability/eco/governance/risk.html

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.

Also, the progress and results of activities for the key environmental targets we promised to society to achieve under the GREEN IMPACT PLAN 2024 (GIP2024) are examined and determined on the directions, issues, and particularly key measures in the Group Management Meeting where Group CEO, presidents of operating companies, and senior managers participate. Matters of special importance are deliberated on by the Board of Directors Meeting.

Our long-term environmental vision "Panasonic GREEN IMPACT (PGI)", was put through this process and was released in April 2022. In promoting our environmental sustainability management, we have built a system with which all operating companies and business sites members effectively collaborate and promote group-wide activities through determination by the Sustainability Management Committee (established in December 2021) led by the Group CEO. For activities organized by theme, there are specific committees for disseminating our environmental policy and targets to all members in the Group, for deliberating on how to respond to issues, and for managing the chemical substances used in our products.
See page 23 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 2030, 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 30-33 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 CO_2 emissions (Scope 1 and Scope 2) net-zero by 2030.
- Reduce CO_2 emissions from use of our products that Panasonic Group sold by 30% compared with the 2019 level by the year 2030.

We would like to introduce specific examples as our contribution to energy reduction and energy transformation in society.

The first is an example of our energy reduction activities for product use in Scope 3; that is, action on lighting equipment that emit large volumes of CO_2. In addition to the conventional lighting that is designed to "light up a plane" such as a floor or desktop, by using an index for 'feeling of brightness in space' and knowhows of "optical control technology" and "spatial presentation with proper lighting at a right place" that are developed based on our accumulated research results on comfortability, we will achieve energy reductions of up to 30% without compromising comfort.

The next is an example of our contribution to energy transformation in society through electrification. To speed up energy transformation in society, the demand side must itself push for electrification by replacing fossil fuel-fired equipment with electric devices. For instance, the heat pump water heater is capable of warming up water by using a heat pump to collect heat from the air efficiently, minimizing the electric power consumption. The heat pump can be used not only in new houses, but also in existing houses that use oil or gas-fired boilers without replacing the pipework. Electrification increases opportunities to make effective use of electric power derived from renewable energy sources. In addition to that frequency of utilizing opportunity to use energy derived from renewable energy sources increases thanks to the electrification, storing unstable supply of renewable energy as the warm water enables energy time shift and mitigates the load on the power grid, thus contributing to wider use of renewable energy resources.

PDF **Panasonic's Sustainable Management (Group CEO Briefing, January 2022)**
https://holdings.panasonic/global/corporate/investors/pdf/20220106_sustainability_e.pdf
See pages 41-44 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 pages 130-131). The management policy includes (1) identification of environmental risks and group-wide risk management each year, and (2) 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. (PHD) and operating company. The PHD Enterprise Risk Management Committee conducts deliberations from the perspective of the Group's management and business strategies and social responsibilities, and decides the Group's significant risks.
In FY2024, strategic risks in Panasonic Group's significant risks such as climate change, environmental regulations and development of circular economy, and operational risks such as earthquakes, tsunami, flood and landslides have been addressed.
See page 25 for more details.

Metrics and Targets

The Panasonic Group has set its medium- to long-term target for reducing greenhouse gas emissions, was 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.

*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 above pre-industrial levels.

GHG emissions reduction targets (SBT 1.5°C accreditation)

	Targets	Progress rate
Emissions from Panasonic Group business activities (Scope 1 and 2)	Reduce 90% by 2030 (compared to FY2019)	23%
Emissions from use of Panasonic Group products (Scope 3)	Reduce 30% by 2030 (compared to FY2019)	—*3

*3 Progress rate not calculated due to increase in emissions because of expansion of products subject to calculation (see page 13)

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 CO_2 emissions, with a aim of by 2050, achieving reduction impact of more than 300 million tons that is 'approx. 1%' of the total CO_2 emissions discharged all over the world as of now, through group business activities.

In addition to our business operations in automotive battery business for environmentally friendly vehicles, aiming to reduce huge amount of CO_2 emissions and activities to reduce CO_2 emissions by the air quality and air conditioning business in Europe, in 2022 we started up an experimental facility under 'our RE100 solution' that had been designed to supply 100% of the power needed for a fuel cell manufacturing plant with renewable energy from hydrogen and photovoltaic power generation,*4, aiming at locally producing energy and consuming the energy locally.

• Capital allocation

Panasonic Group plans to invest 600 billion yen for the three years from 2022 to 2024 under

our medium- and long-term business strategies, mainly in automotive battery business that is in our priority investment areas.. Following the investment in automotive battery business, we have air quality and air conditioning business and supply chain management software business that we invest in our priority investment areas.

Our automotive battery business will play a central role for PGI by developing a supply chain with lower environmental impact and increasing avoided emission by such business growth As for our air quality and air conditioning business, we plan to expand the business in the European market where measures against climate change have been implemented, by focusing on air-to-water systems that will contribute to reducing CO_2 emissions. As for our supply chain management software business, we will contribute to reducing the environmental impact by eliminating waste and delays in the supply chain.

PDF **Panasonic Group Strategy Briefing by Group CEO (May 18, 2023)**
https://holdings.panasonic/global/corporate/investors/pdf/20230518_groupstrategy_e.pdf

• Internal carbon pricing

Panasonic Group introduced internal carbon pricing in March 2022 for capital investment, with a setting the price of CO_2 emissions at 6,000 yen per ton.*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.

• 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 CO_2 emissions in our own value chain.

*4 See WEB https://news.panasonic.com/global/press/en220427-1

*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	- Energy procurement costs increase. - Competition from low-carbon businesses intensifies toward carbon neutrality.	- 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.
		Accelerated shift to electric vehicles	- 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.	- Electric vehicle-related markets expand.
	Reputation	Increased environmental awareness among consumers	- Insufficient environmental efforts and promotion lead to unsupported by consumers. - Value shift from purchasing to leasing decreases sales.	- 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	- Insufficient efforts in decarbonization reduce business opportunities.	- Recognition of environmental technologies and products increases business opportunities.
	Technologies	Expansion of renewable energy usage	- Investment in facilities with renewable energy increases.	- Highly efficient solar cells open new markets.
		Expansion of carbon-free power generation	- Production energy procurement costs increase. - Regional disparity of carbon-free power generation lead to review the strategies of production sites.	- CO_2 emissions reduction throughout product lifecycles encourages shift to electric vehicles leading to related market expansion.
		Spread of ZEH/ ZEB	- Low-carbon products in housing equipment become mere commodities.	- 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	- Increases development costs of lightweight and robust materials for competitive low-carbon products.	- Increases demand for materials that contribute to reduction of energy consumption.
		Streamlining of supply chain	- Expanded capital investment puts stress on balance sheet.	- Demand for energy management systems increase. - Lowered prices from reduced production costs increase sales.
	Markets	Response to depletion of resources	- Delay in recycling and reuse technologies increases costs. - Resource recycling does not suit consumers' tastes.	- Business models change to circular economy- based models. - Demand for recycled resources increases.
Physical risks	Chronic	Constant temperature rise	- Poor health of employees reduces productivity. - High energy consumption from excess usage of air conditioners puts off consumers.	- Businesses related to healthcare, air conditioning and ventilation, energy management, housing, and cold chain expand.
	Acute	Physical risk management related to climate change	- Suspension of operations at our factories. - Negative impact on supply chain.	- Demand for needs of resilient infrastructure increases. - Fuel cell business with resilience expands. - Disaster-resilient manufacturing by managing risks with BCPs.

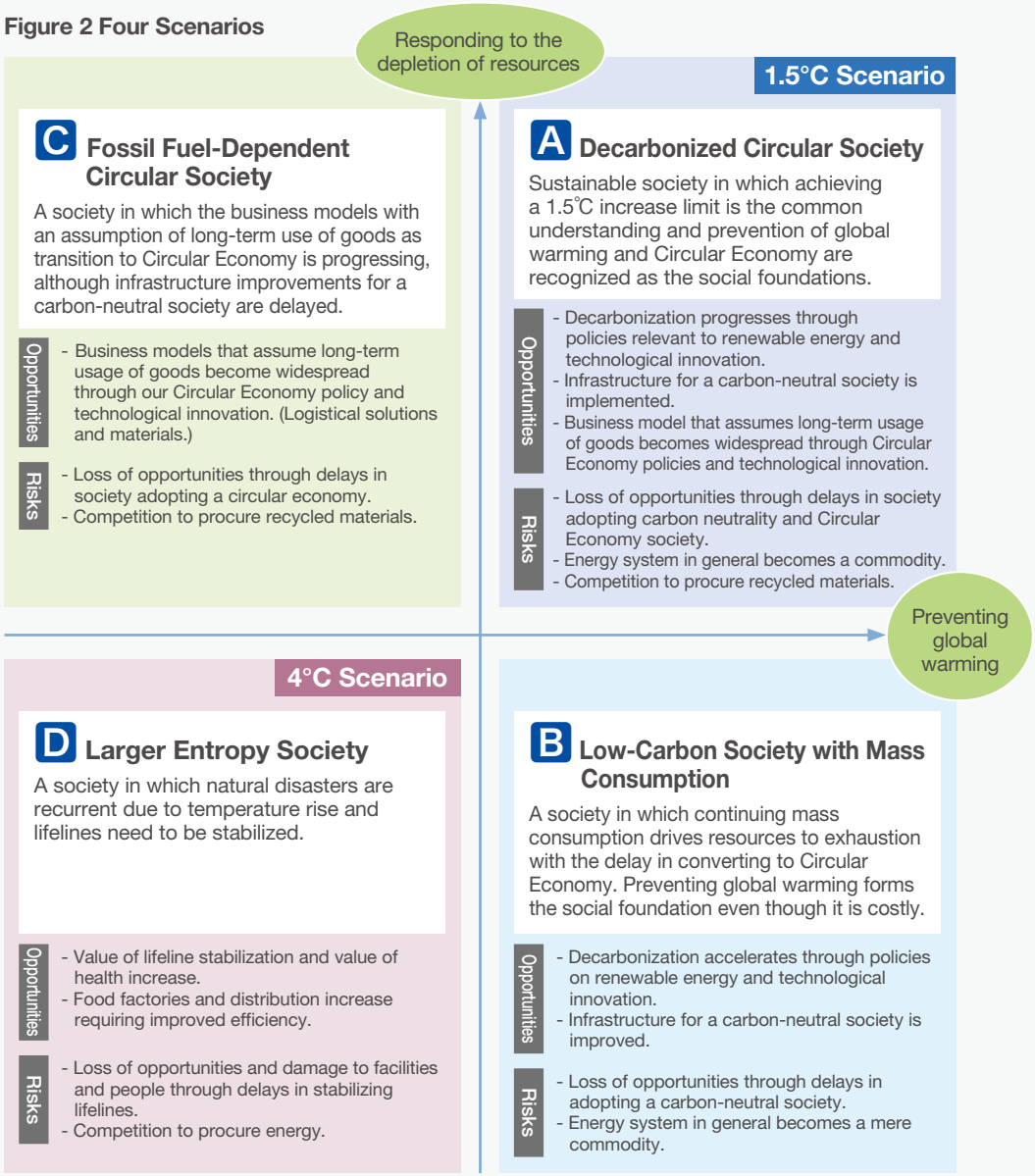
The following figure shows the impact analysis results of climate change risks (Figure 1) regarding the results of analyzed factors based on the identified risks and opportunities and analyzed impact on our businesses.

Figure 1 Impact Analysis of Climate Change Risks

Risk categories related to climate change		Strong	Impact on our businesses	Extremely strong
Transitional risks	Markets			● Response to depletion of resources
	Policies/laws and regulations		• Acceleration of carbon pricing	• Progressive shift to electric vehicles → ● Prevention of global warming
	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		

We extracted “response to depletion of resources” and “prevention of global warming” from the climate change viewpoint and identified their materiality as factors that have an extremely high impact on our business. Setting these two factors as the axes of a matrix, we created four scenarios toward 2030 in the following quadrants (Figure 2). We defined a society in which global warming is prevented and response to depletion of resources is taken as ‘the 1.5°C scenario’, and a society in which global warming is advanced and resources are depleted as ‘the 4°C scenario’.

Figure 2 Four Scenarios



The society named as a A Decarbonized Circular Society is equivalent to the 1.5°C scenario. If A continues to deplete resources, society becomes a B Low-Carbon Society with Mass Consumption. If A increases global warming, society becomes a C 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 preventing global warming 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.).

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 seven 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 Automotive Systems Co., Ltd.
3. Panasonic Connect Co., Ltd.
4. Panasonic Energy Co., Ltd.
5. Panasonic Industry Co., Ltd.
6. Panasonic Entertainment & Communication Co., Ltd.
7. Panasonic Housing Solutions Co., Ltd.

For each type of society, we have formulated strategies for our seven 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.

1. Panasonic Corporation

1-1 Heating, Ventilation, Air Conditioning (HVAC) System Business

• 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

1-2 Overseas Electrical Construction Materials Business

• 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

1-3 Energy Solutions Business (Hydrogen Related Businesses)

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

1-4 Home Appliances Business in Japan

• 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

2. Panasonic Automotive System Co., Ltd.

• Contribute to electrification of vehicles through power chargers with high output using power electronics technology and devices that improve vehicle's weight saving and rate of electricity consumption.	A B C D
• Promote to make own products more energy efficient and further expand the range of products that use recycled resin materials.	A B C
• In our sites that achieved net zero CO_2 emissions, we are further reducing energy usage through energy-saving activities and increasing the ratio of non-external dependency on renewable energy supply.	A B

3. Panasonic Connect Co., Ltd.

• 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

4. Panasonic Industry Co., Ltd.

• Supply products that contribute to vehicle electrification and improved power economy.	A B
• Reduce environmental impact through provision of products that contribute to product/equipment downsizing, light weight, low energy loss, and longer product life.	A B C
• Achieve zero CO_2 emissions by increasing adoption of energy-saving schemes and renewable energy use in manufacturing activities.	A B

5. Panasonic Energy Co., Ltd.

• Increase avoided CO_2 emissions, by increasing the number of electric vehicle users through improving the competitiveness of our automotive batteries and enhancing our production capacity, and promoting electrification of power equipment such as construction machine through modularization and systematization of batteries for industrial use.	A B C
• Reduce CO_2 emissions through achieving carbon neutrality in factories and material development and establishment of supply chain for a low carbon footprint.	A B C

6. Panasonic Entertainment and Communication Co., Ltd.

• Promote energy-saving per product category by introducing devices with high energy efficiency, improving their control methods, and the like.	A B
• Promote circular economy through acceleration for using recycled resin, adoption of eco packaging, refurbishing businesses, and the like.	A C

7. Panasonic Housing Solutions Co., Ltd.

• Reduce CO_2 emissions in our value chain by thorough implementation of energy-saving initiatives and electricity generation, and at the same time, enhance product ranges that contribute to CO_2 emissions reduction in society.	A B
• Increase use of recycled materials, plant-derived materials, and the like for resource circulation.	A C

The scenario analysis found that we could always focus on one or more of our businesses in each of the four scenarios. 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℃ world, represented by our society A.

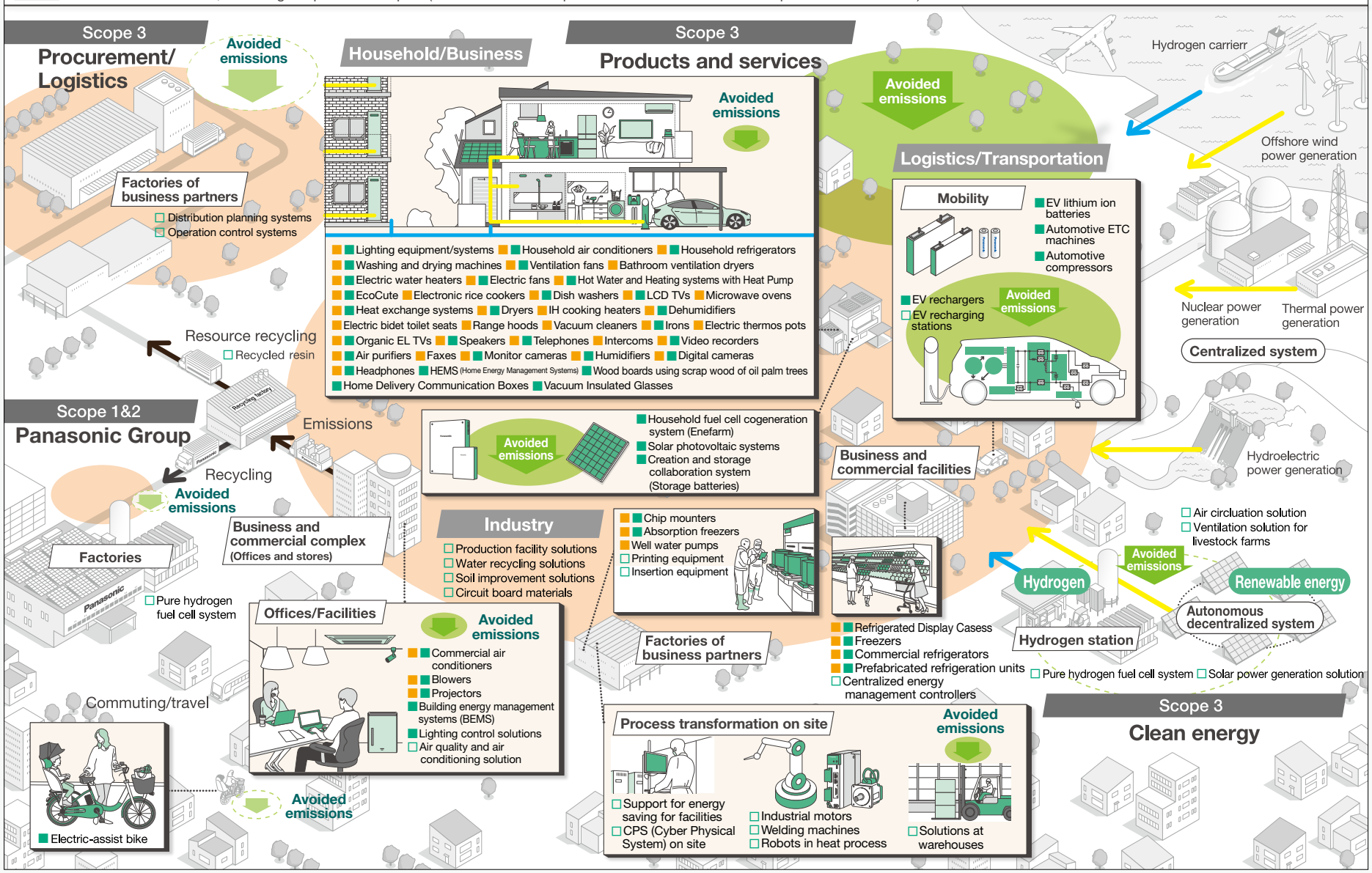
Our Businesses' Contribution to Carbon Neutrality

(From FY2023 business results)

Amount of GHG emissions
Reduced amount (Estimates indicated by ⋯)
Products with emissions
Products with avoided CO_2 emissions
The products with avoided CO_2 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 13-14 because of sub categorization for calculation in businesses such as those for heat exchange systems, electric fans, microwave ovens, and display cases.
As the extracted business fields are the fields whose positive and negative impact on climate change are obvious, names and their coverage may differ from those in the business segments used in the TCFD-related reports.

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 CO_2 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 CO_2 emissions by sharing the information and taking measures.

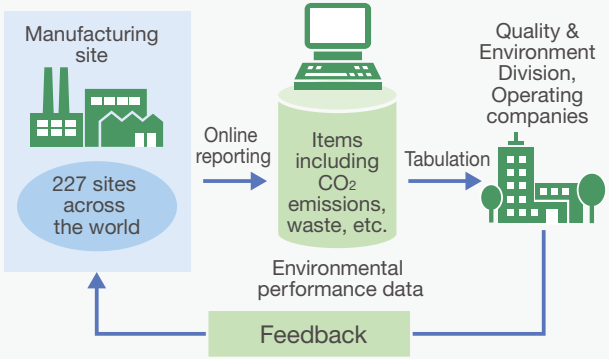
The Eco System (Factory) is also functioning as a scheme for sharing information on the status of compliance among sites across the world. In the event of complaints from local community residents or when a specific value exceeds ordinance regulated levels, as soon as the person in charge at the business 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.

As for products, legislation relating to chemical substances in products is becoming more stringent, and communication and disclosure of chemical information in the EU supply chain are mandatory under the REACH Regulations. 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.

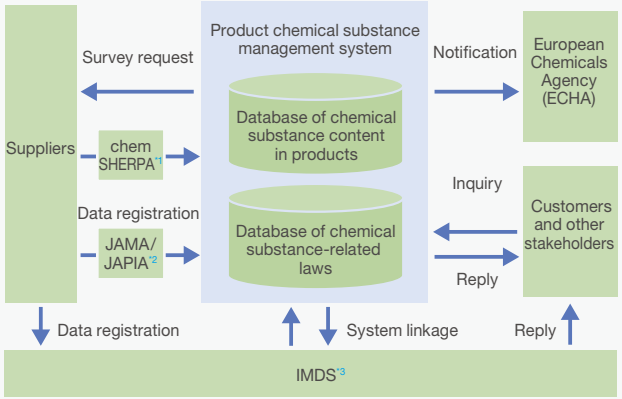
In January 2017, we renewed the system to adopt chemSHERPA,[*1] the new format for information handling of chemical substances in products led by the Ministry of Economy, Trade and Industry (METI). With the expansion of Panasonic Group's automotive business, we also adopted the JAMA/JAPIA sheet,[*2] the standard material data format for the Japanese automotive industry, in order to respond to increasingly complex and diverse regulations covering chemical substances used in products. 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 system.

Mechanism of the Eco System (Factory)



Mechanism of the Product chemical substance management 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.
*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)

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 CO_2 and wastes into the environment.

Production: 227 manufacturing sites and 72 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 products*9 with large amounts of energy use and CO_2 emissions (b) associated therewith.

a = Annual power consumption of a model sold*10 x Sales quantity x product life*11

b = Annual power consumption of a model sold*10 x Sales quantity x product life*11 x CO_2 emission factor*12

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 materialsof a separated product.

*1 Figures from photovoltaic, wind, and biomass sources including the amount of renewable energy adopted to manufacturing and non-manufacturing sites of own group . Heat pumps not included.

*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 “CO_2 Emissions from Fuel Combustion” 2021 issued by the International Energy Agency (IEA) is used for the CO_2 emission factors for electricity purchased from different countries use.

*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 Intra-region outside Japan not included.

*6 Figures for Japan.

*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 Household air conditioners, commercial air conditioners, lighting equipments and lamps, household refrigerators, commercial refrigerators, LCD TVs, washing and drying machines, fully-automatic washing machines, dish washer and dryers, IH cooking heaters, EcoCute, bathroom ventilation dryers, humidifiers, dehumidifiers, air purifiers, ventilation fans, electric fans, electronic rice cookers, microwave ovens, electric bidet toilet seats, irons, hair dryers, electric showers, electric water heaters, under-rug heaters, vacuum cleaners, electric water boilers, range hoods, projectors, mounting machines, 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 CO_2 emission factors (kg-CO_2/kWh) used: 0.487 (Japan); 0.277 (Europe); 0.383 (North America); 0.623 (China & Northeast Asia); 0.723 (India & South Asia); 0.386 (Southeast Asia & Oceania); 0.252 (Latin America); and 0.616 (Middle East & Africa).

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

Overview of Environmental Impact from Business Operation

INPUT	Suppliers	OUTPUT
Energy: ★4.7 TWh Purchased electricity 3.23 TWh including renewable energy ★0.47 TWh*1 Installation of renewable energy facilities in our own sites ★0.06 TWh Town gas 71.0million m³ LNG 8.8kt LPG 5.6kt Heavy oil 6.9Ml Light oil 2.0Ml Kerosene 1.8Ml Volatile oil 0.1Ml Steam 434TJ Hot water 49TJ		CO_2: 1.63 Mt*3 GHGs other than CO_2 from energy use (CO_2-equivalent): 183 kt*13
	Production	Total wastes including revenue-generating waste: 282 kt / Landfill: 2.3 kt Water discharged: 11.78 million m³ Release and transfer of chemical substances: 3.767 kt*4*13
Resources Recycled resin:12.4 kt Recycled iron: 87 kt Water: 15.27 million m³ Chemical substances: 234.7 kt*2*13		
Energy: 1.50 MWh*5 Biodiesel fuel: 9.89 kl*5	Logistics	CO_2: global 887 kt domestic ★123 kt
Electricity: 184.7 TWh	Product use	CO_2: 95.03 Mt
Collected products: 162 kt*5*7*8 CRT TVs: 5 kt Plasma/LCD TVs: 11 kt Air conditioners: 36 kt Refrigerators/freezers: 62 kt Washing machines/clothes dryers: 48 kt	Recycling	Recycled products: 123 kt*5*7 Metals: 89 kt / Glass: 2 kt / Other: 32 kt Generated waste: 39 kt*5

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.

The overall emissions across Scopes 1 to 3 in fiscal 2023 increased by 29.1 million tons compared to fiscal 2022. The major causes were increase in the purchase figure used as the amount of activity in Category 1; inclusion of CFCs that may leak from products at the time of usage or disposal (Categories 11 and 12); and commencement of data collection and disclosure for Categories 10 and 15.
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 Figures for Japan
*18 Including Scope 1 and Scope 2 from FY2023
*19 9,024 (kt) are due to the influence of CFC
*20 6,788 (kt) are due to the influence of CFC

Category		Emissions (kt)	
		FY2022	FY2023
Scope 1 *14		338	406
Scope 2 *15		1,723	1,433
Scope 3 *16	1. Purchased goods and services	14,114	21,543
	2. Capital goods	694	880
	3. Fuel- and energy-related activities	229	212
	4. Upstream transportation and distribution	953	887
	5. Waste generated in operations	2	0.1
	6. Business travel	16 *17	32
	7. Employee commuting	20 *17	111
	8. Upstream leased assets	19 *17	– *18
	9. Downstream transportation and distribution	18 *17	61
	10. Processing of sold products	–	153
	11. Use of sold products	81,493	★95,029 *19
	12. End-of-life treatment of sold products	496	7,537 *20
	13. Downstream leased assets	–	–
	14. Franchises	–	–
	15. Investments	–	928
	total	98,050	127,371
Scope 1-3 total		**100,110**	**129,209**

Numerical values in units of (t) are introduced on the following website.
WEB 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 2023

Environmental conservation in factories	
Investments*21	6,590 million yen
Expenses*21*22	155 million yen
Economic benefit	1,655 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.

Environmental Conservation Benefits for Fiscal 2023 (in physical terms)

Categories	Emission reduction	Reference indicator: environmental impact	
		Fiscal 2022	Fiscal 2023
CO_2 emissions from production activities	320 kt	1.95 Mt	1.63 Mt
Human Environmental Impact	▲15 kcount	416 kcount	431 kcount
Landfill of waste	0.6 kt	2.9 kt	2.3 kt
Water consumption	1.97 million m^3	17.24 million m^3	15.27 million m^3

Fiscal 2022 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 2023

Electricity cost reduction from product usage (global)	
Reduced amount of electricity*23	30.9 TWh
Reduced electricity costs*24	783.5 billion yen

*23 Calculated under the same conditions as when determining the size of contribution in reducing CO_2 emissions through energy-saving products (see page 12).

*24 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 470 billion yen for the group-wide total R&D expenses in fiscal 2023 will be invested mostly for promoting “Panasonic GREEN IMPACT”.

Eco-conscious Products and Factories

Initiatives for Eco-conscious Products (Green Products)

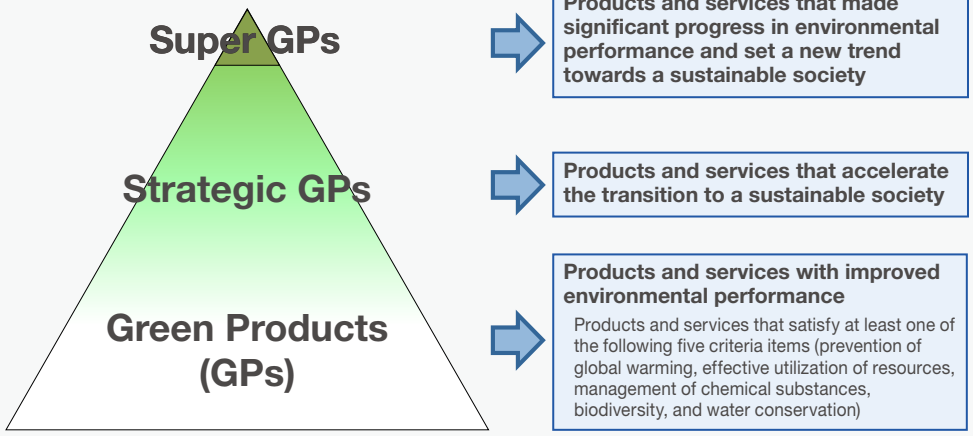
Based on the product assessment system where the environmental impacts of products and services area assessed from the planning and the design stages, Panasonic Group defines own products and services that achieved high environmental performance as Green Products (GPs).

In the GP accreditation criteria, we assess the performance of our products in terms of prevention of global warming, effective utilization of resources, and management of chemical substances by comparing them not only with our own products but also with competitors' products. Since fiscal 2012, we have conducted various activities to further enhance our accreditation criteria by adding biodiversity and water conservation to existing items. This has in turn enabled the creation of a wider range of GPs. The products and services which have been developed from the conventional superb Green Products*1 starting from fiscal 2014, and which can accelerate the transition to a sustainable society, are newly defined as Strategic GPs.

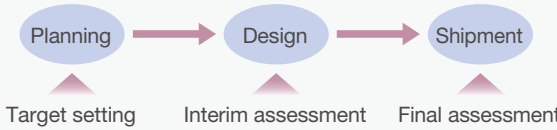
Among these products, those that particularly create new trends are certified as Super GPs.

*1 Products and services that showed superb environmental performance to products in the same category in the industry.

Green Product Structure



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*2		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

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

We conduct Life Cycle Assessment (LCA) in which the environmental impact of the product is analyzed and assessed in each stage of the product life cycle, i.e. materials, manufacturing, transportation, use, and disposal. LCA is a concrete means to reduce environmental impact.

We also conduct carbon footprint (CFP) assessment that is a quantitative analysis and an assessment using conversion of GHG to CO_2 emitted in each stage of the product life cycle upon request from our customers, with a aim to lead to prevent global warming.

Initiatives for Eco-conscious Factories (Green 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 CO_2 emission, generated wastes and valuables, water consumption, and discharged and transferred chemical substances, conduct Progress management for total reduction amount with basic unit 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[*3] 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 CO_2, 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. During pandemic, we were able to reduce risks and improve interactive skills without stopping our activities, combining online meetings considering COVID-19 infectious status in various region. 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 and regulations, as well as utilizing expertise accumulated in our Group companies.

Cross-company compliance assessment (CCCA)

*3 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.

Reducing CO_2 Emissions in Factories

Reducing the Amount of the Energy Used and CO_2 Emissions in Business Activities

To achieve Panasonic GREEN IMPACT, Panasonic Group has been working on toward making zero-CO_2 factories[*1] by promoting our efforts internally and externally to realize net zero CO_2 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 zero-CO_2 factories to 37, aiming to reduce 260,000 tons of CO_2 emissions. In the Zero-CO_2 Factory Promotion Taskforce we started up in September 2021. The taskforce aims to create and provide group-wide measures to accelerate the creation of zero-CO_2 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. Following to the last year, we held online study sessions two times for group members, and total of 720 members participated in the sessions. 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 zero-CO_2 factories means realization of net zero CO_2 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. The Panasonic Group publishes, both internally and externally, our accelerating efforts towards reaching our goal of net zero CO_2 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."

WEB https://news.panasonic.com/global/stories/2021/90376.html

■ Increasing the number of zero-CO_2 factories

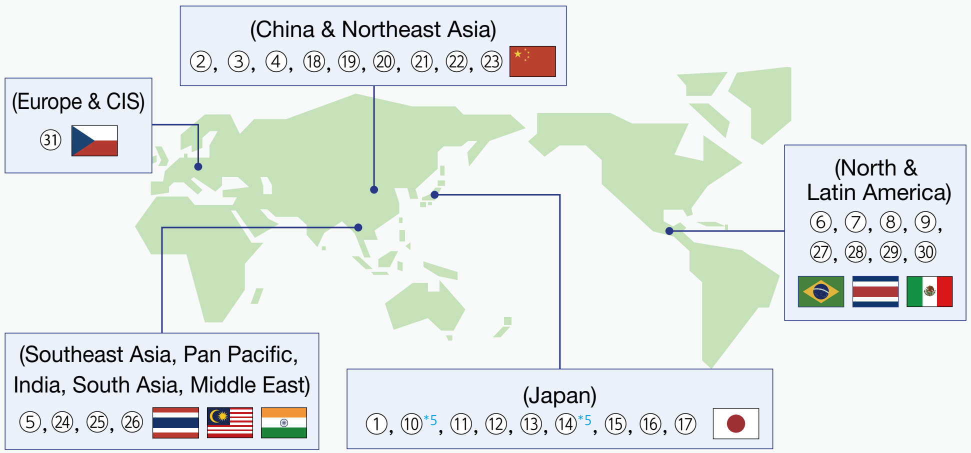
Since establishing the group's first zero-CO_2 factory in fiscal 2019, the Panasonic Group achieved conversion of nine factories across five regions[*3] to zero-CO_2 factories by fiscal 2022. Since fiscal 2022, it has been in a phase to increase the number of zero-CO_2 factories. In fiscal 2023, eight more factories in Japan achieved zero CO_2 emissions; along with six in the China and Northeast Asia region; three in the Southeast Asia, Pacific, India, South Asia, Middle East, and Africa regions; four in the North America and Latin America regions; and one in Europe and CIS. This makes a total of 31 factories[*4] achieving net zero CO_2 emissions to date. We are steadily progressing towards the GIP2024 target of 37 zero-CO_2 factories.

One achievement example in fiscal 2023 is Panasonic Electronic Devices (Jiangmen) Co., Ltd. (PEDJM) in China. The company installed a 3.94 MW photovoltaic system in fiscal 2022 followed by a range of energy-saving facilities in fiscal 2023, including a highly efficient air conditioning system and inverter water circulation pumps. Also in Asia, Panasonic Energy India Co., Ltd. (PECIN) installed a 350 kW photovoltaic system, adding to continued their energy-saving activities such as an air leakage detection campaign, and optimal control of production facilities. At the both sites, net zero CO_2 emissions have been substantially achieved by procuring I-REC certificates and utilizing credit to offset CO_2 emissions from fossil fuels, and the like.


Photovoltaic power generation systems at PEDJM


Photovoltaic power generation systems at PECIN

Zero-CO_2 Factories across the Globe



*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, 31 factories have realized zero-CO_2 factories.
Up to fiscal 2022:① Panasonic Eco Technology Center, ② Panasonic Energy (Wuxi) Co., Ltd., ③ SANYO Energy (Suzhou) Co., Ltd., ④ Panasonic Manufacturing (Beijing) Co., Ltd., ⑤ Panasonic Energy (Thailand) Co., Ltd., ⑥⑦⑧ Panasonic Brazil (three factories; San Jose, Manaus and Extrema), ⑨ Panasonic Centroamericana S.A.
Fiscal 2023: ⑩ Panasonic Center Tokyo, ⑪ Panasonic Automotive Systems Co., Ltd. Matsumoto Region, ⑫ Panasonic Automotive Systems Co., Ltd. Tsuruga Region, ⑬ Panasonic Automotive Systems Co., Ltd. Shirakawa Region, ⑭ Panasonic Automotive Systems Co., Ltd. Yokohama Building, ⑮ Panasonic Energy Co., Ltd. SUMOTO Factory, ⑯ Panasonic Energy Higashiura Co., Ltd., ⑰ Panasonic Energy Nandan Co., Ltd., ⑱ Panasonic Electronic Devices (Jiangmen) Co., Ltd., ⑲ Panasonic Industrial Devices (Tianjin) Co., Ltd., ⑳ Panasonic Industrial Devices Materials (Guangzhou) Co., Ltd., ㉑ Panasonic Industrial Devices SUNX Suzhou Co., Ltd., ㉒ Panasonic Automotive Systems (Dalian) Co., Ltd., ㉓ Panasonic Automotive Systems (Suzhou) Co., Ltd., ㉔ Panasonic Automotive Systems Asia Pacific (Thailand) Co., Ltd., ㉕ Panasonic Automotive Systems Malaysia Sdn. Bhd., ㉖ Panasonic Energy India Co., Ltd., ㉗ Panasonic Automotive Systems Monterrey Mexico S.A.de C.V., ㉘ Panasonic Automotive Systems de Mexico S.A. de C.V., ㉙ Panasonic Automotive Systems Reynosa Mexico S.A.de C.V., ㉚ Panasonic Energy Mexico S.A. de C.V., ㉛Panasonic Automotive Systems Czech, s.r.o.
*5 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*6 in fiscal 2023 marked 55 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. The major achievement in fiscal 2023 was installation of photovoltaic power generation systems in Japan.

We installed a photovoltaic power generation system at Youkaichi site of Laundry Systems and Vacuum Cleaner Business Division (LVBD), Panasonic Living Appliances and Solutions Company under a Power Purchase Agreement. The system installed this time, comprises 2,658 photovoltaic panels in total that generate 997 kW, and equipped with a 22.4 kW storage battery that enables efficient usage of power.


Photovoltaic power generation system at Youkaichi site, LVBD, Panasonic Living Appliances and Solutions Company

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

WEB https://holdings.panasonic/global/corporate/sustainability/environment/carbon-neutral/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 certificates and credits to offset CO_2 emissions from fossil fuel. This effort contributed to converting factories in Japan, China, and Southeast Asia to zero-CO_2 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 in February 2023. We estimate that we will be able to reduce 19,000 tons of CO_2 emissions per year with the system. 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.

WEB https://news.panasonic.com/jp/topics/204036.html

In August 2019, Panasonic Group joined “RE100”*7, an international initiative that brings 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 2023 was 15.6%.

*6 The amount from photovoltaic energy, wind power, and so on are included. The amount from heat pumps is excluded.
*7 Press release on August 30, 2019.
Panasonic Joins RE100 Aiming for Business Operations with 100% Renewable Energy
WEB https://news.panasonic.com/global/press/data/2019/08/en190830-2/en190830-2.html

Activities for reducing energy use and CO_2 emissions

To ensure implementation of reduction of the amount of energy used and CO_2 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 CO_2 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)*8, which visualizes and analyzes energy consumption. An example of factory energy-saving support service is on the following website.

WEB https://www.panasonic.com/global/corporate/sustainability/eco/co2/service.html

Panasonic Corporation is conducting a demonstration experiment of the RE100 solution[*9] using pure hydrogen fuel cells in Kusatsu Factory, Shiga. Since February 2022, Panasonic Energy (Wuxi) Co., Ltd. (PECW) in China, has been conducting a demonstration experiment of pure hydrogen fuel cells that supply electricity and heat. PECW achieved net zero CO_2 emissions in fiscal 2022 through promoting energy-saving, adopting photovoltaic panels, and procuring renewable energy. The pure hydrogen fuel cells to be used for a demonstration experiment this time are three types: firstly, starting with 30 kW small-scale power generation using six connected 5kw highly efficient pure hydrogen fuel (PHF) cells; secondly, 300 kW medium-scale power generation PHF cells for the mid- to long-term experiment; and thirdly, 1 MW large-scale generation PHF cells for commercialization. The pure hydrogen fuel cells are able to supply both electricity and heat, and create cooling air in summer by supplying hot water to a lithium bromide freezer. The demonstration experiment this time is to achieve zero CO_2 emissions from energy saving and energy creation without procuring external renewable energy.

Green house where a fuel cell system is controlled.


Pure hydrogen fuel cells installed at PECW

Flow implementation using low-temperature solders.

Panasonic Corporation adapted a flow implementation using a low-temperature solder to the mass production of our household products[*10] as a world first.[*11] Lead-free solders that were developed considering toxicity of lead are most commonly used now; however, there is an issue that their melting points becomes high. On the other hand, as for low-temperature solders whose meting points are lower than 184°C, it is difficult to put such solders into practical use because of their low intensity and durability. With a collaboration with materials manufacturers, we have now optimized the chemical composition of the low-temperature solder. As a result, we developed a Sn (tin) and Bi (bismuth) solder alloy (Sn-58Bi) that is suitable to the flow implementation, and a flux dedicated to use for Sn-58B1, then applied the implementation flow using the low-temperature solder for mass production of our household products as a world-first. As the melting point of Sn-58Bi is 90°C lower than those of conventional lead-free solders, the power consumption during the implementation process is reduced by approx. 30% (Scope 2). Furthermore, by using Sn-58Bi whose basic unit of CO_2 emissions is low, the amount of CO_2 emissions is drastically reduced (Scope 3). Therefore, replacing the current solders with Sn-58Bi contributes to CO_2 emissions reduction.

The Panasonic Group will continue to accelerate necessary activities to achieve Panasonic GREEN IMPACT, e.g. proactively developing and adopting environmentally low-impact materials and methods.

*8 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.

*9 Press Release (May 24, 2022)
WEB https://news.panasonic.com/global/press/en210524-2

*10 Based on our research as of August 3, 2022.

*11 Press Release (August 3, 2022)
WEB https://news.panasonic.com/jp/press/jn220803-2

Activities at Factories

Under a company-wide energy-saving project started by Panasonic Automotive Systems (PAS) Co., Ltd., PAS has raised energy-saving awareness among its members and thoroughly implements measures to eliminate waste. Specifically, energy saving activities with visualized energy use by each site are posted on a PAS portal website where all employees can view. In addition, information on energy saving that are easy to put into practice in workplaces and the like is regularly posted on the website. At all of PAS factories, members are working together to reduce energy loss as a whole PAS through measures such as optimization of ventilation including management of positive pressure in clean rooms and at manufacturing process areas, review of operational conditions such as for furnaces and improvement of insulation, and review of cooling systems. Furthermore, as a result of adopting renewable energy, such as by installing photovoltaic power generation systems at each site, in January 2023, all global 14 sites[*12] achieved net-zero CO_2 emissions[*13], including six in Japan and eight outside Japan

*12 All of the global 14 sites managed by Panasonic Automotive

*13 Press Release (January 27, 2023)
WEB https://news.panasonic.com/global/press/en230127-2

Collaborative measures sui China's carbon peak and carbon neutrality road map

The Chinese government announced its carbon neutrality long-term policy with the prospect of the country's carbon peak. There is a movement that the Chinese government tries to strengthen the current Emissions Trading Scheme (ETS) particularly through early enforcement of "Interim Regulations on the Management of Carbon Emissions Trading", improvement of accuracy of CO_2 emissions data, and expansion of the scope of the subject and methods of trades. As the Panasonic Group has a number of business sites within China, it is necessary to

clarify our country-specific environmental issues and their contribution values. To address any identified issues, we will proactively build collaborative measures optimized for China utilizing our accumulated expertise of CO_2 emissions reduction in production processes. Although the Panasonic Group is not in the eight sectors covered by China's ETS, we will continue to monitor and understand the above-mentioned social trends as early as possible, and seek for various better methods for emission control such as increase of renewable energy use and conversion to zero CO_2 factories from the viewpoint of establishing collaborative measures with local stakeholders

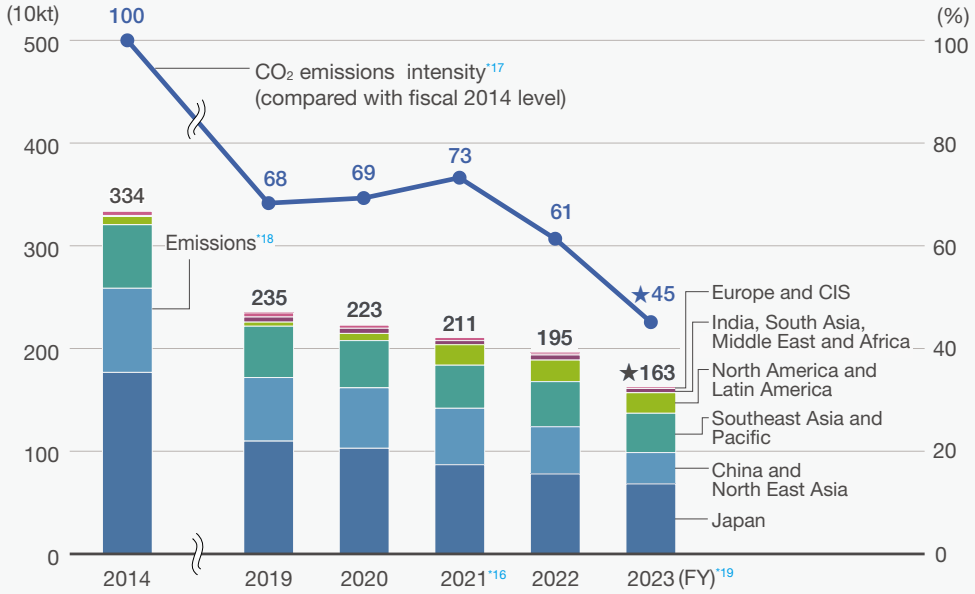
Fiscal 2023 Results

These efforts in fiscal 2023 resulted in 4.7 TWh[*14] of the energy used in business activities, and the amount of CO_2 emissions was 1.63 Mt. The fiscal 2023 investment to reduce the amount of energy used and CO_2 emissions by the efforts was 5.5 billion yen.[*15]

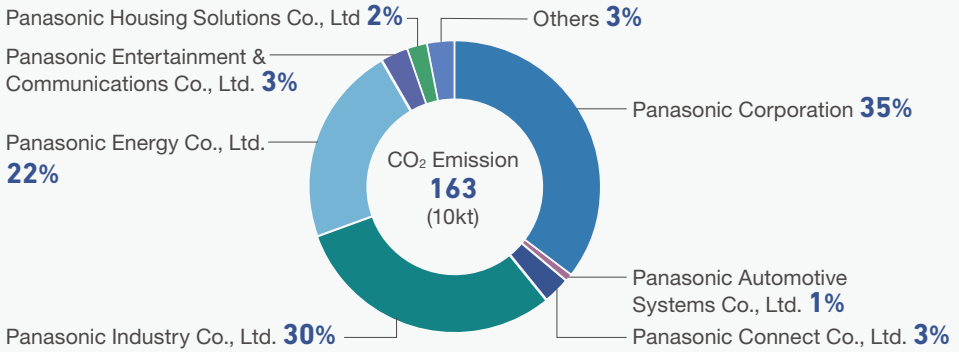
*14 In fiscal 2021, the unit used to measure the energy consumed in business activities was changed from TJ to TWh. The consumed power is measured in kWh and the consumed fuel is measured using its calorific value and then converted to electrical power units at 3.6MJ/kWh. These two values are then totaled.

*15 The total amount includes all investments concerning reduction of the amount of the energy used and CO_2 emissions. Note that differences or proportions of the investment are not calculated.

CO_2 Emission in Business Activities and CO_2 Emission (by region) Per Basic Unit



CO_2 Emission in Business Activities (by operating company)



*16 Includes emissions of Panasonic Corporation of North America after FY2021

*17 We calculated the improvement rate of the 'CO_2 emissions intensity' versus that of fiscal 2014', which was obtained by dividing CO_2 emissions by the sales volume of all Group companies.

*18 The CO_2 emission relevant to fuels was obtained by calculating 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 "CO_2 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 and the IEA Emissions factors 2022 were used for FY2023.

*19 Includes non-manufacturing sites after FY2023

*20 In the case that net zero CO_2 emissions is achieved in the middle of the FY, the CO_2 emissions results before the FY will remain.

Breakdown of Total GHG Emissions (CO_2-equivalent) in Business Activities (by category)[*21]

[Unit: kt]

			FY2021	FY2022	FY2023
Scope 2 Energy sources			1,862	1,723	★1,433
Scope 1	CO_2 from energy sources		246	232	★224
	CO_2 from non-energy		82	106	★183
	(non-Energy Sources)	*CO_2*	*1*	*1*	*1*
		HFC	*73*	*101*	*180*
		SF_6	*3*	*3*	*2*
		NF_3 and others	*5*	*2*	*1*
Carbon offset by credit				-12	-26
Total			2,189	2,048	1,812

*21 The emissions of GHG other than CO_2 from energy sources by Hussmann Parent Inc. and its consolidated subsidiaries, Panasonic Corporation of North America, and non-manufacturing sites are not included.

Resources

Promotion of Circular Economy

Alongside changes in customer lifestyles, there is now 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. Amid this development, the Panasonic Group is introducing the idea of circular economy and 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.

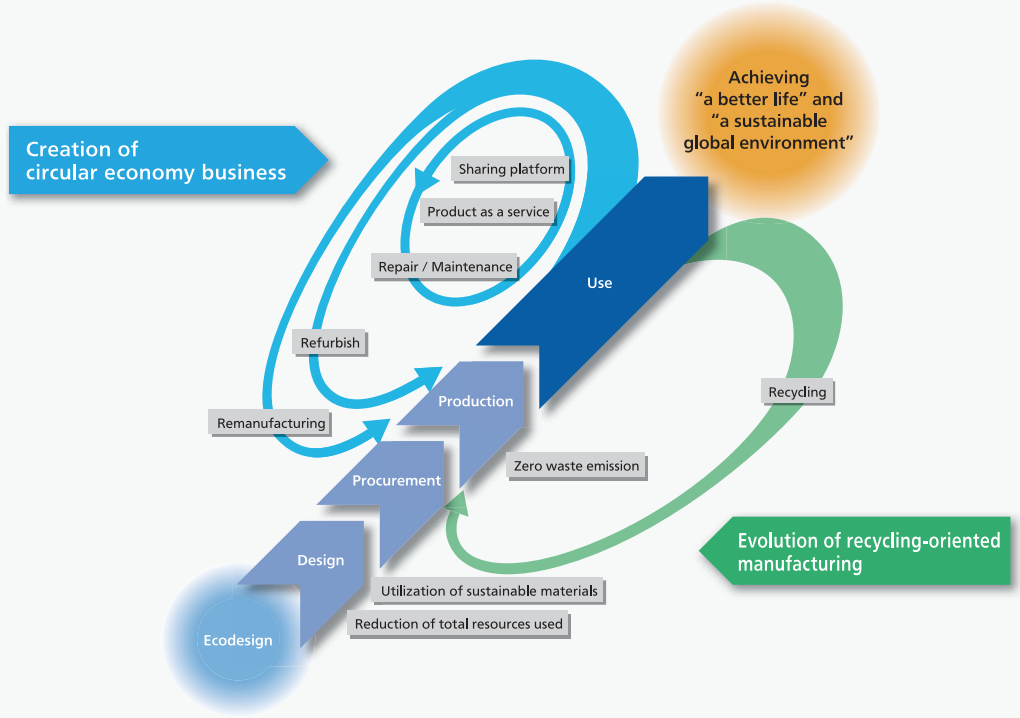
In order to realize the new value of using only product functionalities instead of using or owning the whole product, we will strive to create circular economy businesses. These include a "Sharing service", where multiple users use the same individual product, a "Product as a service" where services 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 continue to work towards achieving the resource-related targets listed in GREEN IMPACT PLAN (GIP) 2024. We plan to adjust our existing businesses along the circular economy aspects as outlined in our concept above. We are also using the same mapping with future new businesses, and aim to establish at least 13 new circular economy business models by 2024.

We plan to improve materials to meet both the characteristics requirements and environmental safety, ensure stable supplies, advance production technology to use new materials, and improve recycling technology, through which we aim to achieve a total of more than 90k tons of recycled resin (cumulative from FY2023-2025). Additionally, zero waste emissions are important

for us as a part of efficient usage of resources and we will continue our efforts to achieve a factory waste recycling rate of 99%.

To accelerate these activities, we started the global project in April 2020 with Panasonic Europe as the project lead. This five-year project is still ongoing, and its main aim is to identify the business opportunities related to a circular economy and assess their viability as new business models to be run as pilot programs. The Global Circular Economy Project also plays a role as a business opportunity platform among our group companies to promote collaboration across business boundaries. This project has become increasingly important, and has been fully integrated into the Sustainable Business Consortium, which promotes circular economy as a part of Panasonic GREEN IMPACT.

Creation of Circular Economy Business

In our drive to promote the efficient use of resources and to maximize customer value, we are working to create businesses based on a circular economy model. Our first business model is our “products as a service.” We have implemented a scheme to provide display cases with refrigerators/freezers, combined with a refurbishment service for those refrigerators and freezers: Instead of selling refrigeration equipment to supermarkets, convenience stores or other food retailers, the service offers “food refrigeration” as a value. The refurbishment scheme focuses on inspecting and repairing display cases that have been used at retail chain stores for reuse at other retail stores. 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.

In Europe, we offer a remote monitoring service for the Aquarea Air-to-Water Heat Pump. This cloud-based maintenance service currently in operation in Denmark constantly monitors the operations of the heat pump and detects any faults immediately. The monitoring service then automatically dispatches engineers to inspect and repair the equipment onsite. We plan to expand this maintenance service to other European countries. The use of IoT can ensure the prolonged life of the products, while at the same time improving their safety, reliability, and convenience.

The Revalue Project converts factory wastes into completely different products that offer new value through creative design. To date, the factory wastes generated from production of irons, rice cookers, and system kitchens have been converted into bookends, lighting, and tables through collaboration with our partner companies. This project received a 2022 Good Design Award (Business Model category) in recognition of the business value it offered. We have also started a business to utilize factory offcuts generated in production. This is achieved by the three approaches of data utilization, ecological secondary use, and collaboration with creators. The factory offcuts of synthetic marble, which is used to make kitchen counters, has particularly grown into a promising project. We continue to offer new value through expanding collaborative creation.


Subscription service "noiful"

As another subscription model, we started a service for our rental housing, “noiful,” in January 2022. Noiful[*2] 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, repairs and replacements, and appliance cleaning 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 becomes 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 houses more easily, which should 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.

Paper-based battery packaging

Employment of paper packaging also reduces environmental impact and provides ease of use at the same time, encouraging environment-friendly consumption (consumer behavior that takes the environment into consideration).[*3, *4] As our first change, paper-based battery packaging was employed for some models of the EVOLTA NEO Battery in October 2021. The coverage of such paper-based battery packaging was widened to include more EVOLTA NEO Battery models, and the original EVOLTA Battery in April 2023. We also released an improved version of our eneloop rechargeable nickel hydride battery that also incorporates paper-based battery packaging. The new version offers longer usage duration per charge through its increased capacity while retaining the same number of recharges. Demand for environment-friendly packaging has been increasing in recent years due to the worsening effects of climate change and plastic waste problems. According to a survey conducted by the Panasonic Group, 90% of respondents

thought that excess packaging and plastic are used in products in general, and 80% of them value environment-friendly packaging when purchasing products. For eneloop, the packaging materials have been reduced by between 38% and 70% compared to the conventional blister pack by adopting paper-based battery packaging. By increasing use of environment-friendly packaging in the eneloop lineup, we aim to reduce 5.7 tons of plastic and 21.5 tons of paper in our usage every year, making a combined total of approximately 27 tons of packaging. The elimination of shrink film to cover the batteries also makes it easier to open. The package can also be used as storage for unused batteries and be disposed of as recyclable paper or general waste. Less packaging materials reduces the environmental impact and easy-to-handle packaging reduces the labor of opening and disposing. We thereby offer a little help in the lives of our environmentally-conscious customers.

Under a partnership with Lawson, we are jointly working on energy saving, CO_2 emissions reduction, and more efficient usage of resources. The Lawson store opened in Nanjing in July 2020 was built with significantly less building waste through prefabricated construction and material recycling. The same kind of stores have also been built in Shenyang and Tianjin. Further, we started operating mobile convenience stores in Shenyang and Wuhan. The store vans are equipped with refrigerators and other electrical equipment realizing flexible and effective sales. Another ecological scheme recycles refurbished store facilities in Chongqing, Shanghai, and other areas to reduce facility waste. In addition, model eco-friendly stores were opened in Shanghai in April 2021, and Dalian in July 2021. These next-generation stores boast high environmental performance through the latest energy and CO_2 emissions saving solutions, including an Energy Management System (EMS) that visualizes and controls electricity usage by refrigerators and air conditioners. These solutions received high praise in the China International Import Expo (CIIE) held in Shanghai in 2022.

Prefabricated Lawson store

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 four more circular economy businesses were created this fiscal year in addition to our six existing ones. We are continuing to expand the scale of our circular economy business.

1	Subscription services for refrigerator/freezer display cases
2	Subscription services for cooling box for pharmaceuticals
3	Akari E Support services (LED Lighting leasing service)
4	Battery management business in the PC subscription services
5	Effective utilization of owned buildings
6	Business development of mixed cellulose plastics
7	Refurbishment services with Lawson
8	Subscription services for home appliances (noiful)
9	Use of factory wastes for parts
10	Adoption of paper-based battery packaging

*1 See WEB https://www.tennoz-rim.tokyo/
*2 See WEB https://news.panasonic.com/jp/press/data/2022/01/jn220119-1/jn220119-1.html
*3 See WEB https://panasonic.jp/topics/2023/03/000000746.html
*4 See WEB https://news.panasonic.com/jp/press/jn230330-1

Evolution of Recycling-Oriented Manufacturing

We use many kinds of resources, including iron (28 % of total resources used) and plastic (10 % 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.

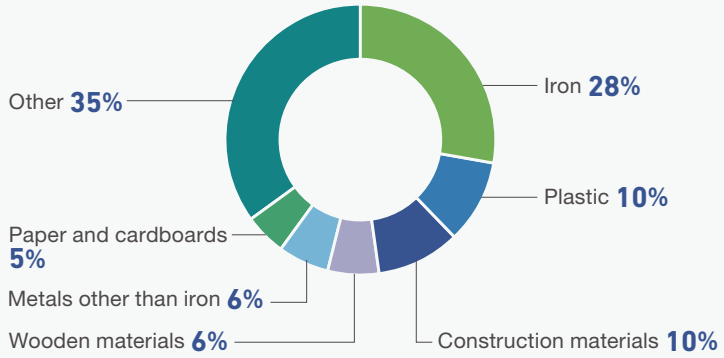
Furthermore, we are clarifying recycled resource use by identifying the volume of each type of resource used across the Panasonic Group. For example, in the case of recycled resin, we used approx. 12.4 kt of recycled resin in our products in fiscal 2023. In order to achieve the respective GREEN IMPACT PLAN (GIP) 2024 target, we worked on responding to the characteristic required for components, ensuring a stable supply, devising ways to use at the manufacturing site, and developing recycling technologies.

As for the factory waste recycling rate*5, 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 year 2011 and are taking steps to improve the standard level of waste recycling across the entire Group. The factory waste recycling rate in fiscal year 2023 was 99.1% compared to our target of more than 99%, falling short of the target (see page 51). We

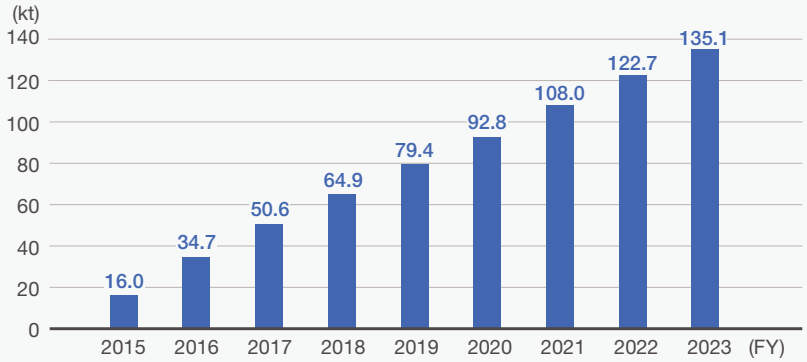
will continue to implement measures to achieve the zero waste emissions.

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

Breakdown of Input Virgin Resources Used in Fiscal 2023 (by category)



Results of Recycled Resin Usage (Cumulative total from fiscal 2015)



Reduction in Resources Used

To minimize the use of resources for production, we continuously look to reduce the weight of our products. Through the Product Environmental Assessment (see page 39), 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.

WEB 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.

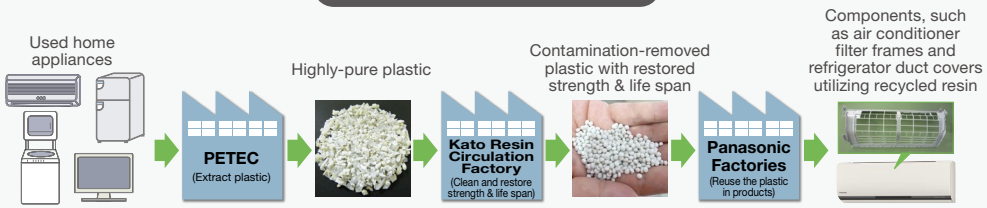
WEB Our approaches to Resources Recycling

https://www.panasonic.com/global/corporate/sustainability/eco/resource_sp.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 factory, Panasonic Eco Technology Center Co., Ltd. (PETEC), and Kato Plastic Recycling Factory of the Appliances Company work together for resin recycling.

Process of 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 99%.

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

The recycled single resins sorted and recovered at PETEC are then transferred to the adjacent Kato Plastic Recycling Factory to be further purified and processed to recover their chemical properties. Kato Plastic Recycling Factory is a manufacturing and development site that demonstrates promotion of 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. Because of 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, we plan to find recycled plastic suppliers based on the recycled plastic development and quality assessment techniques cultivated in our Kato Plastic Recycling Factory.

Development and Use of New Sustainable Materials

Cellulose fiber can be derived from various natural resources, such as wood residues from forest thinning, and other organic wastes, and it is now drawing attention as a resource with low environmental impact. In fiscal 2019, we developed a composite polypropylene (PP) resin containing plant-derived cellulose fiber as an additive. Also, we developed a molding material mixed with plant-derived cellulose fiber. This new eco-conscious material is used in the frame parts of our cordless stick-type vacuum cleaner and contributes to its reduced weight, one of the most important features of the product. In fiscal 2020, the content of the cellulose fiber could even be increased to more than 55% while maintaining the whiteness of the material thanks to our special processing technology.

In fiscal 2021, we further advanced the technology to increase the amount of cellulose fiber, and established a process that enables 70% cellulose fiber composition, along with a technology that can smoothly mold the material into products. These technologies increase the plasticity of the material despite the high content of cellulose fiber, enabling product designs intended to feature the natural feel of the material. (The product received the MEXT Minister's Prize under the FY2021 50th Japan Industrial Grand Prize held by Nikkan Kogyo Shimbun, Ltd.) In March 2023, we started sales of sample molding materials made of plastic and plant-derived cellulose fiber, kinari CeF70-PP, "kinari70."

We successfully established a commercial level of technology to mix a high density plant-based cellulose fiber into resin. We then applied the same technology to mix cellulose fiber into plant-based resin (bio-polyethylene) and successfully developed 90% high density cellulose fiber composition materials. Mixing a high density cellulose fiber into soft bio-polyethylene enabled us to achieve the same strength as our conventional kinari, but in a white color.


Cellulose fiber composition materials with a biomass content of 90% or more

To produce fully biodegradable composition materials, we combined plant-based cellulose fiber with biodegradable resins. Conventional biodegradable resins have more restricted applicability compared to generic resins, such as polypropylene, due to their lower strength and durability. When mixed with cellulose fiber, such biodegradable resins show poor fluidity, therefore their application became even narrower. We developed composition materials that offer biodegradability and high plasticity to the level of 1 mm-thick molding, by blending multiple biodegradable resins, including plant-based polylactide resin, with appropriate additives.

Just in the same way as conventional kinari, the new material is also available as white pellets that can be colored as required.

The new material has been certified as a biodegradable biomass plastic by the Japan BioPlastics Association.

In the area of housing materials, we exclusively developed an eco-conscious 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 environment-friendly approach. This product can reduce the consumption of natural materials and also contributes to preserving biodiversity (see page 57). We intend to develop more new products with this technology, focusing also on developing

new recyclable resources.

WEB **Developed a high-density cellulose fiber composition material which has flexibility in design**
https://news.panasonic.com/jp/press/data/2019/07/jn190708-1/jn190708-1.html

WEB **Commenced sales of samples of kinari, high density cellulose fiber composition materials**
https://news.panasonic.com/jp/press/data/2021/12/jn211201-2/jn211201-2.html

WEB **Jointly developed ECOALF, the sustainable fashion brand of Sanyo Shokai Ltd.**
https://news.panasonic.com/jp/press/data/2022/03/jn220330-2/jn220330-2.html

WEB **Jointly developed the K-WORLD ism products with Panasonic Production Engineering Co., Ltd.**
https://news.panasonic.com/jp/press/data/2022/04/jn220419-3/jn220419-3.html

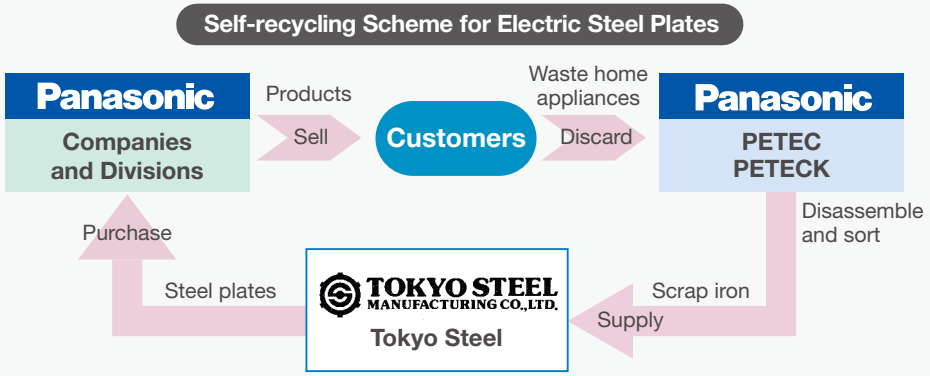
WEB **Developed 70% high density cellulose fiber composition materials**
https://news.panasonic.com/jp/press/data/2021/02/jn210204-1/jn210204-1.html

WEB **Developed 90% high density cellulose fiber composition materials.**
https://news.panasonic.com/jp/press/data/2022/03/jn220318-2/jn220318-2.html

WEB **Developed fully biodegradable cellulose fiber molding material**
https://news.panasonic.com/jp/press/jn221206-1

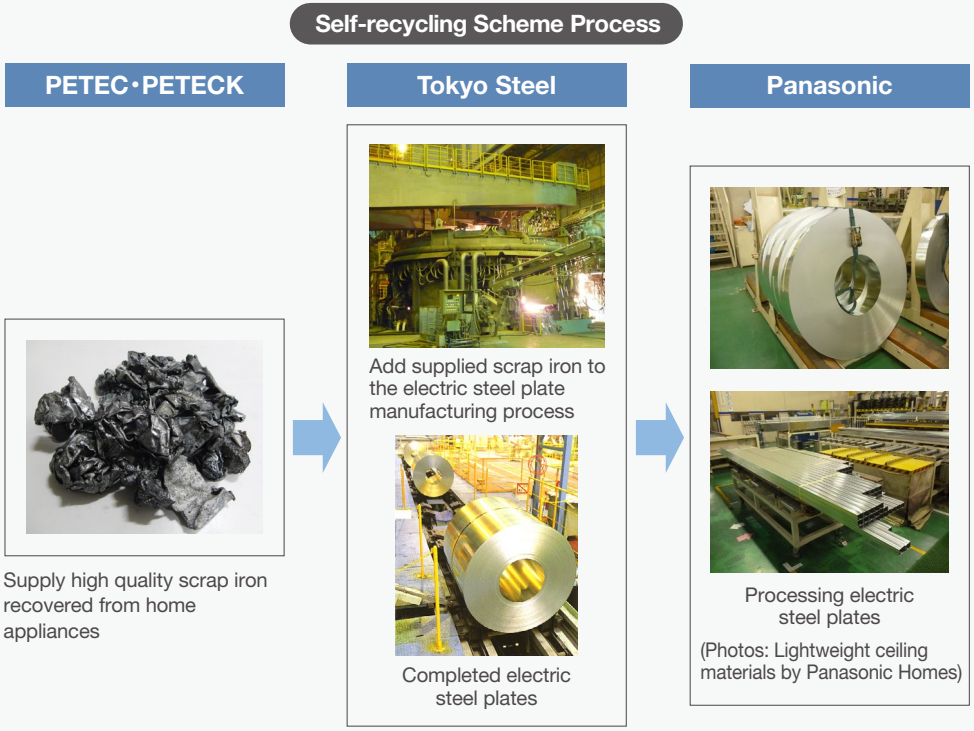
Building a Recycling Scheme for Scrap Iron

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.



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.[*6] We procure the recycled steel plates and utilizes them in products. Discussions with Tokyo Steel commenced in 2010, 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. Use of thin electrical steel plates in our products was first made possible in 2011. Through this close collaboration, we materialized this recycling scheme in 2013, 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 2023, it reached over 2.6kt per year, and the recycled steel is being used in our products, including washing machines and ceiling materials for housing.



The increase in electrical steel plate usage leads to an increase in the usage of scrap iron, which is one of the most important resources in Japan. In addition, producing steel plates from scrap iron emits much less CO_2 compared with producing steel plates from scratch. This scheme also stabilizes the procurement price, because the price of scrap iron supplied from PETEC and the price of electric steel plates procured from Tokyo Steel are determined by the scrap iron fluctuation rate agreed between the two companies. We will further expand this recycling

scheme for more efficient resource utilization, CO_2 emissions reduction, and stabilization of procurement prices.

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

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*7 goal by reducing the amount of landfill to nearly zero. We have reinforced such efforts particularly in China and other Asian countries, where many of our factories are located.

With the waste plastic import control introduced in China, the volume of material being recycled has dropped, leading to an increase in landfill waste disposal. As a result, the factory waste recycling rate in fiscal 2023 was 99.1%, achieving the 99% target in our GPI 2024. We will introduce more activities which aim to maintain and improve the factory waste recycling rate.

As a means to reduce the generation of waste, we are fostering resource-saving product design. In our production activities, we are engaging in resource loss reduction, employing our own unique material flow analysis methods. We consider materials that do not become products and excessive use of consumables as resource losses, and make the material flow and lost values for each process visible in order to resolve the issues in close collaboration with the design, manufacturing, and other relevant business divisions. In the future, we will promote further reductions in resource losses through the Resource Loss Navigation, our original system developed to automatically display information to help reduce resource losses.

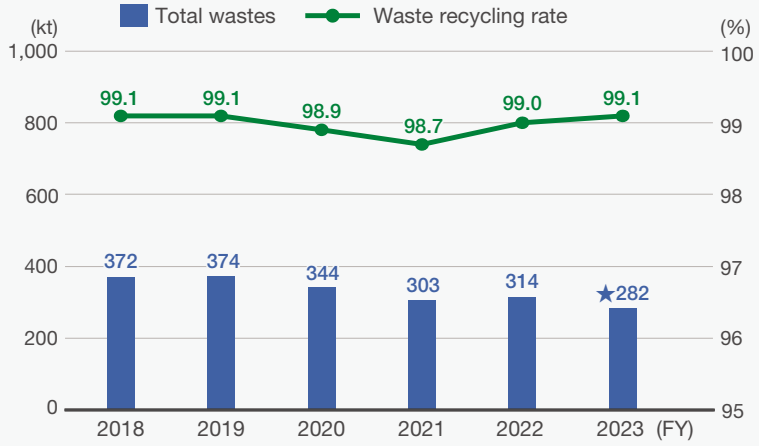
As an initiative to reduce the amount of final disposal of waste and valuables, we will reduce the amount of materials that are particularly difficult to recycle, such as thermosetting resins. We are also strictly adhering to waste sorting practices in production processes to further expand the reuse 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*8 prepared by each region, following our long-standing approach toward CO_2 reduction activities.

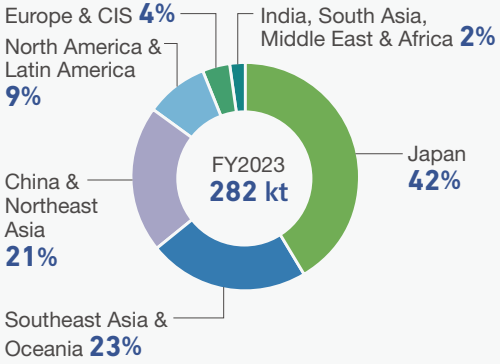
*7 Definition by the Panasonic Group: Recycling rate of 99% or higher. Recycling rate = Amount of resources recycled/(amount of resources recycled +amount of landfill).

*8 A chart-format summary of comparisons between “before and after” implementation of waste reduction and recycling measures.

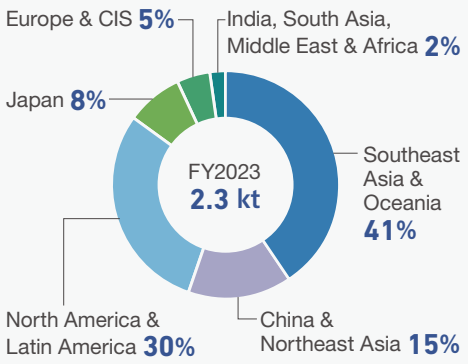
Amount and Recycling Rate of Total Wastes Including Revenue-generating Waste



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



Breakdown of Landfill (by region)



Breakdown of Total Wastes Including Revenue-generating Waste for Fiscal 2023 (by category) (kt)

Items	Total wastes	Recycled	Landfill
Metal scrap	127	126	0.6
Paper scrap	31	31	0.1
Plastics	34	32	0.7
Acids	14	9	0.05
Sludge	8	7	0.2
Wood	24	24	0.01
Glass/ceramics	4	4	0.1
Oil	12	11	0.05
Alkalis	15	14	0.003
Other *8	11	10	0.6
Total	282	268	2.3

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

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.

FY2022 Results

Japan Processed approx.	161.91 kt of four kinds of used home appliances
USA Collected approx.	76 t of used electronic products

Product Recycling Initiatives in Japan


Machine to turn over air conditioner outdoor units at PETECK

In response to the Home Appliance Recycling Law of 2001, which covers four specified kinds of home appliances*9, 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 329 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)*10 and exchange information with product manufacturing divisions to develop easy-to-recycle designs, as well as conducts research and development to efficiently recover and supply more resources. In fiscal 2023, we recycled approx. 161.91 kt of the four specified used home appliances.

Although the statutory recycling rate*11 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.

In the summer of 2019, PETECK automated a part of its air conditioner processing line, using an articulated robot to turn over and transfer air conditioner outdoor units during the dismantling process. The recognition device identifies the position and size of the outdoor unit, and based on the identified information the articulated robot picks up and moves the unit to the standard dismantling process or to the process for dismantling special items such as window-type units. This has enabled safe and efficient air conditioner processing, relieving workers of dangerous work that required physical strength to turn outdoor units (weighing 33 kg in average) upside down. As for PETEC, it promotes high grade single-plastic recycling using plastic recognition equipment.
See pages 48-49 for more details.

*9 Air conditioners, TVs, refrigerators/freezers, and washing machines/clothes dryers.
*10 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.
*11 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 and plasma TVs, 70% for refrigerators and freezers, and 82% for washing machines and clothes dryers.

WEB **Overview of Recycling of Specified Home Appliances (Japan)**
https://www.panasonic.com/global/corporate/sustainability/eco/resource/recovery/recycling.html
WEB **Panasonic Eco Technology Center Co., Ltd. (PETEC)**
https://panasonic.net/eco/petec/

Efforts in the Europe / CIS Region

In 2021, we collected approx. 21.87 kt*12 of used products covered by the WEEE Directive across Europe.

Circular Economy as the main trigger for usage of recycled material in products

The EU released its 1st and 2nd 'Circular Economy Action plan in 2018 and 2020, and in a similar way, many EU Member States have published their own national Circular Economy Action Plans. Meanwhile, we see more and more legislative requirements coming up in in Europe that put the usage of recycled material in new products in its focus. As an example, the draft EU Ecodesign for Sustainable Products Regulation (ESPR) has been published – expected to enter into force 2024 or 2025 – will set the legal frame for minimum amounts of recycled material that will be individually defined for different product groups. Accordingly, Panasonic has started considering how to prepare our business for such new recycled material requirements in future. For instance, this includes ensuring stable material supplies with guaranteed quality. In addition, we intensified the internal discussion about the impacts on product design, the enhanced reuse of products and components, or how to further improve and simplify the recyclability of products.

*12 Calculated by multiplying the weight of collected products per collection system by our market share in terms of weight per collection system.

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 1.2 billion lbs. (approximately 600 kt) since its inception in 2007. With the changes in our business strategies in the US, our remaining collection obligations are de-minimis, MRM will continue operating its collection programs on behalf of the manufacturers it serves.

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 300 companies, and collected more than 94.5 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. The currently active provincial EPR programs have proven to be very effective in diverting e-waste as reflected in 2020 totals, where 109.41 kt in Canada were collected.

Efforts in China

In China, we are engaged in activities to clarify the 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 carrying out an assessment of the development of the Plan on Promoting Extended Producer Responsibility promulgated by the government in January 2017, as well as 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.

Efforts in Southeast Asia and Oceania

Vietnam

With the introduction of recycling law in July 2016, producers and importers are required to establish a take back scheme for their products sold in Vietnam. Panasonic Sales Vietnam (PSV) has since set up 7 collection points: two in Ho Chi Minh, and one each in Hanoi, Thanh Hoa, Nghe An, Da Nang, and Can Tho. In 2022, PSV has continued to collect 16.4 tons of e-waste which were sent to licensed recyclers for proper treatment despite the recycling law being superseded by the Law on Environmental Protection 2020 effective since January 2022.

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/QD-TTg Detailing the Implementation of a Number of Articles of the Law on Environmental Protection" under the Law on Environmental Protection 2020 which took effect since 10 January 2022 and requires producers/ importers to

contribute financially for waste treatment of primary batteries from 1 January 2022. PSV has since made the necessary financial contribution for primary batteries placed in the market in 2022 to ensure proper waste treatment for these batteries. Moving forward, producers/ importers will also be required to contribute financially or self-manage e-waste recycling for rechargeable batteries from 1 January 2024 and electronic products from 1 January 2025.

Panasonic Sales Vietnam will work closely with the Vietnamese government to support the implementation of an effective waste treatment and e-waste recycling scheme.

Australia

The National Television and Computer Recycling Scheme (NTCRS) was established in Australia in 2011. Since 1 July 2021, the NTCRS 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 Ecycle Solutions, a co-regulatory arrangement approved by the Australian government to fulfill its obligation under the national scheme, since May 2021. Between January 2022 and December 2022, 23 tons of e-waste were recycled.

Since April 2021, PAU has also joined the Battery Stewardship Council (BSC) as a member. As part of obligations of a member, PAU has been contributing to recycling costs for batteries imported, including 91 tons of batteries imported between January to December 2022.

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 2 (July 2022 – June 2023), 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 5,963 tons of regulated e-waste were collected by the PRS operator, of which LHAs comprised of a total of 91% by weight between January to December 2022.

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 new e-waste recycling law has been implemented by the Ministry of Environment, Forests and Climate Change (MoEFCC) from the 1st of October 2017, with Extended Producer Responsibility (EPR) targets based on end-of-life (EoL) defined in the e-waste (Management) rules 2016. To fulfill the compliance, we will collect and recycle waste home appliances through the “I Recycle” program already established by Panasonic India (PI).

We have also been taking part in the Consumer Electronics and Appliances Manufacturers Association (CEAMA), which promotes an analysis of current recycling activities in India as well as a long-term plan for waste problem solutions.

We are having various dialogues with the Indian government, jointly with CEAMA, about the EPR target and EoL definition for recycling management.

We are also actively engaged in different active associations including the Federation of Indian Chambers of Commerce and Industry (FICCI) and Confederation of Indian Industry (CII) 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), we collaborated in the establishment of a reverse logistics system (a system to collect used products), and promotes efficient collection and treatment of used products.

In Peru, under the recycling law that came into force in 2016, we joined a nonprofit waste management organization (ASPAGER) as a leading member, and started a used-product recovery program.

In Colombia, a framework law for home appliance recycling was enacted in 2018. We have been a member of a used-product collection program (Red Verde/Lumina) conducted by an industry group (ANDI) since 2014, prior to the enactment of operational rules.

In Mexico, a collection program is implemented under the government-approved recycling management plan.

In Chile, the legislation is being considered, and preparations for setting up a collection program are underway through continuous discussions with the government.

Biodiversity Conservation

Ways of Thinking about Biodiversity

Our social lives and business activities are based on various benefit provided by the natural capital (ecosystem services). 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.

Three Targets in GIP2024

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

We will continue to work on activities for biodiversity conservation by disclosing data on our business dependencies and impacts on nature through the Taskforce on Nature-related Financial Disclosures (TNFD), Science Based Targets for Nature (SBTN), and the like.

The Green Impact Plan that is reviewed and revised every three years is equivalent to the Biodiversity Action Plan 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 World Wide 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 2023 are as follows.

Green Procurement Guidelines for Wood Consulted and Formulated with WWF

Total procurement of timber and wood materials	241 thousand m³

PDF **"Green Procurement Guidelines for Wood"**
https://holdings.panasonic/jp/corporate/about/procurement/green/pdf/green_wood_J.pdf

WEB **"Green Procurement Standard"**
https://holdings.panasonic/global/corporate/about/procurement/green.html

WEB **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 dragons 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 external accredited body

Panasonic Corporation's Living Appliances and Solutions 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)*1 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'.
<External certifications and awards>
- Acquired three stars under the Shiga Biodiversity Action Certification Program (2018)*2
- Acquired ABINC certification (March 2018) and renewed the certification (February 2021)
- 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.

In March 2022, LAS joined the Global Ocean Alliance 30by30 initiated by Japan's Ministry of the Environment, which is a global initiative to designate at least 30% of the global oceans as Marine Protected Areas (MPAs) and Other Effective area-based Conservation Measures (OECMs)*3 by 2030, because LAS considers its Sustainable Forest can contribute to it. LAS also applied for its participation in 'the Conservation Site for Human-Nature Symbiosis (tentative name) certification' trial program led by the Ministry of the Environment. In September 2022, LAS got its rating of 'the greenery area equivalent to the certification' as a contributor to the 30by30 OECMs through expert screening; LAS plans to get the official certification within fiscal 2024.

WEB **News release by the Ministry of the Environment on May 27, 2022.**
https://www.env.go.jp/press/111067.html

*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.

The 30by30 Alliance logo mark

ABINC Certification

Three-star rating in Shiga Biodiversity Action Certification Program

LAS's Sustainable Forest

Initiatives for Products and Services

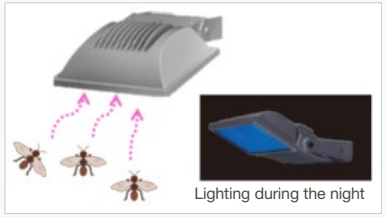
Contributing to Biodiversity Conservation through Lighting

The Lighting Business Division of Electric Works Company, Panasonic Corporation develops and sells lighting products that care for the environment and biodiversity.

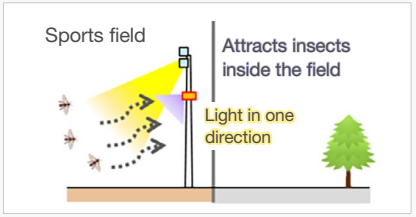
LED Insect Attractor (Product name: Mushi Keeper)

An insect attractor lures insects away from shops, warehouses, and sports fields, where they gather because of the lights, in order to reduce damage and nuisance caused by insects. Conventionally, the device attracted insects with a UV fluorescent lamp and killed them with a high voltage grid. In June 2021, the company launched an LED insect attractor (Mushi keeper). The product's UV and blue LED lights attract and retain insects, enabling reduction of insect damage and without killing them. This helps protect the ecosystem as the insects can return to nature. Conventional insect killers emitted light in all directions, attracting excessive insects. However, this newly adopted LED can emit light in the desired direction only, contributing to protecting biodiversity by its efficient insect attraction. The LED insect attractor has been confirmed to have a higher performance of insect attraction according to the insect attractiveness index.*4

*4 The insect attractiveness index is a theoretical index and does not represent the actual number of insects attracted by the light. (Source: AOKI, S. et al. (2005) Evaluation of Insect Attractiveness by New Index. Proceedings of 2005 Annual Conference of The Illuminating Engineering Institute of Japan, 284.)



LED insect attractor (keep attracting with UV + blue lights)



Emits a directional light to attract insects efficiently

WEB **LED Insect Attractor: Mushi Keeper**
https://www2.panasonic.biz/ls/lighting/outdoor/invites-insects/

Developing IDA-certified LED Light

An LED security light and street light designed by the Lighting Business Division to minimize light pollution were approved as Dark Sky Friendly Lighting by the International Dark-Sky Association (IDA)*5 in February 2020. This was the first such achievement by a Japanese manufacturer*6. One of the approval criteria requires that lighting must have a correlated color temperature of 3,000 kelvin and lower (warm color) not only to reduce light pollution but also to lessen any adverse impact on wildlife.

*5 As IDA-certified lighting made by a Japanese manufacturer (according to IDA Tokyo, as of February 20, 2020).

*6 The International Dark-Sky Association: The leading global organization addressing light pollution.

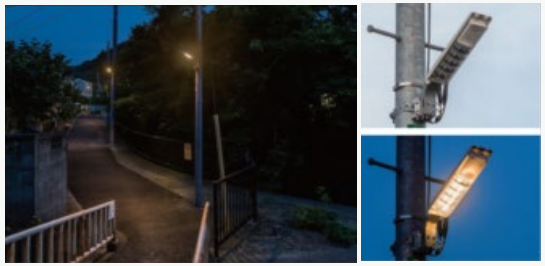
IDA "Dark Sky Approved"

"Guidelines for Countermeasures against Light Pollution" (issued in March, 2021), by Japan's Ministry of Environment. Panasonic Group cooperated to formulate the guidelines.

PDF https://www.env.go.jp/air/hikarigai-gaido-R3.pdf.pdf

Firefly-Friendly Street Lighting

Preceding our IDA-certified LED light, we had already developed an LED light with a spectrum and optical properties that had less impact on fireflies in 2016 and installed the LED lights on streets in different municipalities. According to the study made in Numama, Zushi City, Kanagawa Prefecture, the number of fireflies observed increased from 68 in the previous year to 145*7.



Street lights in Zushi City are replaced with firefly-friendly LED lights

*7 The light was designed purely to minimize disturbance to the firefly habitat and does not guarantee for improving growth of fireflies or increase of the population.

Floor Boards Made from Wood 100% Recycled from Construction Waste Unused Wood Materials, and the like

Panasonic Housing Solutions Co., Ltd. is reducing its use of natural materials to preserve wood resources. 'Sustainable Board' is a new, eco-friendly material that uses 100% recycled wood (excluding adhesives) from construction waste and unused wood materials on a wood-based flooring substrate.

WEB https://holdings.panasonic/global/corporate/sustainability/environment/biodiversity.html#biodiversity_04_01

WEB **Flooring: Eco-conscious material**
https://sumai.panasonic.jp/interior/floor/concept/detail.php?id=eco_coordination

Development of World's First Fiber Board Made from Waste Oil Palm[*8]

In March 2022, we announced the world's first technology to produce fiber board from waste oil palm as PALM LOOP[*9] and started market testing in the domestic furniture area. We are planning to expand sales of the new material to a wider range of markets and sales channels starting in fiscal 2024, scaling-up our activities.

1. We can contribute to reducing methane gas and other GHG generated by decaying waste oil palm.
2. We developed a technology to produce fiber board from waste oil palm.
3. We can prevent deforestation to create new farming areas through utilization of waste material.

We will contribute to alleviating global warming by reducing 'GHG emissions' and preventing 'deforestation'.

WEB **Development of world's first fiber board made from wastes of oil palm trees**
https://news.panasonic.com/jp/press/data/2021/11/jn211115-1/jn211115-1.html

WEB **Launching our PALM LOOP™ technology that can produce fiber boards from wastes of oil palm trees**
https://news.panasonic.com/jp/press/data/2022/03/jn220317-1/jn220317-1.html

WEB **The special PALM LOOP website**
https://panasonic.co.jp/phs/technology/palmloop/

*8 Based on our research as of March 2022.
*9 PALM LOOP™ is a trade mark of Panasonic Corporation.

Conservation of Biodiversity through Collaboration with and Support for NGOs and NPOs

Introduction of MSC-ASC certified sustainable seafood at employee canteens

The Panasonic Group has been involved in marine protection activities[*10] for some 20 years through collaboration with WWF Japan. Main activity at present is continual supply of MSCand ASC-certified[*11] sustainable seafood[*12] to employees' canteens that started for the first time in Japan at Panasonic headquarters in March 2018. As the same as last fiscal year, the number of employees work in the office decreased due to the COVID-19 pandemic. This led to the temporary closure of canteens and a significant reduction of menu items, as well as suspending the sustainable seafood menu in nearly half of the applicable canteens. As difficulties continued, sustainable seafood was newly introduced to only two of the Panasonic Group sites this year, making an accumulated total of 56 sites. Note that as for our continued support for other companies adoption of sustainable seafood into their canteens, the number of adopting companies is steadily increasing. The running total of the canteens of partner companies using sustainable seafood has exceeded 50, making more than 100 when combined with our Group's accumulated total.

Cumulative total of sites offering the menu exceeded 50


Deep fried oysters made in Tokura, South Sanriku; the oysters obtained Japan's first ASC certificate (Panasonic supported the activity.)

In addition to corporate canteens, Yokohama City University COOP has obtained the MSC-ASC certification with the Panasonic Group's support and collaboration, towards the first adoption of sustainable seafood to a university canteen in Japan. 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 canteens, and communicating with employees and the next generation about sustainable seafood and the IUU fishing issues[*13] through media, we are working to change the behavior of our employees as consumers and the public at large. This contributes to SDG 14 Life below Water and promotes to make the topic of biodiversity mainstream.

Partners and Canteens That Have Adopted Sustainable Seafood (Accumulated)

	FY2018	FY2019	FY2020	FY2021	FY2022	FY2023
No. of sites with sustainable seafood menu	2	12	42	52	54	56
No. of certified catering companies (Partners proposed by the Panasonic Group only)	1	6	11	13	17	20
No. of adopting companies (Our partners only)	0	2	4	4	9	11
No. of adopting sites under the above companies(Our partners only)	0	5	27	38	51	55

<External awards>
Champion in the Initiative Category of the 1st Japan Sustainable Seafood Awards (November 2019)

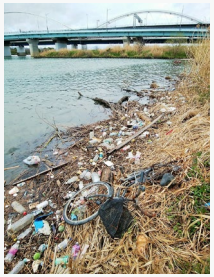
*10 Including supports for the conservation of the tidal flats in Ariake Sea (2001 to 2006) the Yellow Sea Ecoregion (2007 to 2015), and the reconstruction of aquaculture industry in environmentally friendly manner at Minami Sanriku, Tohoku (2014 to current).
*11 MSC certification is certified by Marine 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.
*12 Seafood that has been certified sustainable production with MSC and ASC certification and managed under CoC certification*14
*13 IUU fishing issues: Fishing that is illegal, unreported and unregulated. It is one of the international issues that threaten the effectiveness of resources management.
*14 CoC is the acronym for Chain of Custody. Certification on securing management and traceability in processing, distribution, and marketing.

WEB **References on sustainable seafood**
https://news.panasonic.com/jp/topics/204140.html

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.


Wastes at Yodo River


Activities at Yodo River

Since its foundation in October 2010, PERJ has been working with a variety of stakeholders*15 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*16 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. These activities are for the purpose of biodiversity conservation, however, the cleaning activities at the rivers reduce marine plastic wastes which are directly flowing into oceans. For this reason, we will continue to promote these activities in the future.
<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)

*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.

WEB **Panasonic Eco Relay Japan (PERJ)**
https://www.panasonic.com/jp/corporate/sustainability/citizenship/environment/perj.html

WEB **Unitopia Sasayama Satoyama Revitalization Plan**
https://unitopia-sasayama.pgu.or.jp/ecorelay/

WEB **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 has been participated 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 the Post-2020 Biodiversity Framework of the Convention on Biological Diversity, TNFD, and SBTN through study meetings. We feed these domestic and global policies back into Panasonic Group businesses and assess opportunities and risks. We also make an appeal about activities by Japanese corporations through the Convention on Biological Diversity under the COP.
<Participation>
- Participating in TNFD Forum.
- Keidanren Committee on Nature Conservation: Keidanren Initiative for Biodiversity Conservation. The Panasonic Group also participates in the initiative.
- 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

Keidanren Initiative for Biodiversity logo mark

Additionally, Panasonic Holdings Corporation is participating in 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).

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 (Refer to page 10) 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 as one of the continuing efforts. As for risk management, we had conducted water conservation activities, aiming to complete our water risk assessment at all our production sites by fiscal 2019, and have completed 100% of the assessments.

Specifically, we evaluated the scale of water risk at all regions where our production sites are located, in order to identify and mitigate effects of water on our business activities. In the evaluation, we utilized evaluation tools such as Aqueduct supplied by the World Resources Institute (WRI) and the Water Risk Filter supplied by the Worldwide Fund for Nature (WWF), which can evaluate risks in various aspects; not only from physical risks such as water shortages, but also from the risks in water-related regulations as well as reputation risks in each region. We also made use of public databases available from respective national governments. In areas with higher water risks, we collected information through public local information as well as through hearings with relevant organizations, etc. By conducting detailed analyses and close examination of the local information and the site data including water use volumes, we, more specifically, identified the effects on our business activities. We steadily proceeded processes of the water risk assessments, and in fiscal 2018, completed water risk assessments at all of our production sites of the Panasonic Group. None of our production sites is under water stress. At present, no water risks that could affect the Panasonic Group's business activities have been reported. Yet, we will continue to make efforts to reduce water consumption in our production activities in the future under the water risk assessment that had been implemented.

For promoting these activities, the Panasonic Group have established a structure for the promotion of environmental management, including water management (see page 23). We are now conducting environmental activities using PDCA cycle under the structure, and are upgrading the environmental management level. In addition, we have organized an Environmental Risk Management Structure to continuously reduce environmental risks; under the structure, we (1) identify environmental risks and promote risk management in the whole Panasonic Group every fiscal year and (2) promptly respond to the risk when it arises (see page 25). Through these activities, we will continue to manage our environmental risks.

Moreover, the Panasonic Group has participated in the Water Project, a public-private partnership project aimed at boosting awareness of water conservation, which was launched under the initiative of Japan's Ministry of the Environment in 2014. Objectives of the project are to maintain a sound water cycle and promote its recovery. The project distributes water-related activities conducted by corporations, and water-related information including importance of water. The Panasonic Group will work in cooperation with the Japanese government and other companies to conserve water resources.

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.
WEB 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 used at factories in fiscal 2023 resulted in 15.27 million m^3, which is reduced by 11.4% versus the fiscal 2022. The water used at our factories per basic unit of production[*1] got better year-on-year thanks to positive effects of the structural reform.

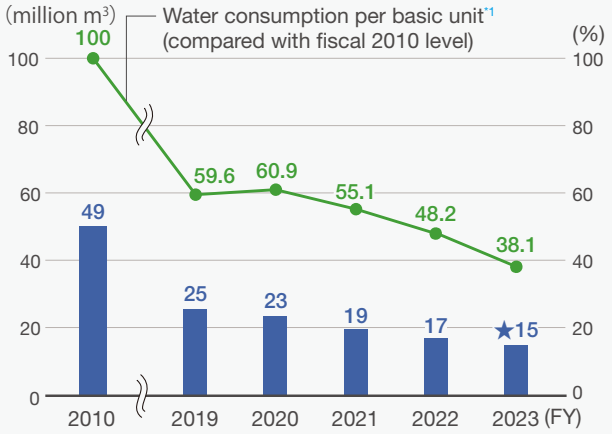
Our use of recycled water[*2] in fiscal 2023 was 1.55 million m^3, accounting for 10.2% of the total amount of water used. The amount of discharged water in fiscal 2021, 2022 and 2023

resulted in 14.81 million m³, 13.39 million m³, 11.78 million m³, respectively.

*1 Water used at factories per basic unit of production = Water used at factories/Production volume.

*2 The calculation excludes the water circulating for a single purpose (e.g., water in a cooling tower).

Water Consumption in Production Activities and Water Consumption Per Basic Unit



Note: Then-SANYO Electric and Panasonic Liquid Crystal Display not included in fiscal 2010.

FY2023 Breakdown of Water Consumption (by region)

(10 thousand m³)

Region	Consumed	Municipal water/ industrial water	Groundwater	Rivers/lakes	Discharged	Sewer systems	Waterways
Japan	822	312	510	0	687	158	529
China & Northeast Asia	339	337	1	0	233	176	57
South East Asia, & Oceania	292	268	24	0	207	157	50
North America & Latin America	45	33	13	0	35	32	2
Europe & CIS	10	9	1	0	9	8	1
India, South Asia, Middle East & Africa	20	1	18	0	7	7	0
Total	1,527	960	567	0	1,178	539	639

Panasonic Industry Co., Ltd. (54 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 18.0% in water consumption (6.47 million m³) in fiscal 2023, thanks to their focused efforts and business restructuring. The achievement rate for reducing the amount of water used per basic unit was 103%.

Against the backdrop of the increasing occurrence of natural disasters in recent years, such as earthquake and flood disasters, Panasonic Industry Co., Ltd. Saga site achieved a reduction of environmental risk and environmental impact, considering a possible chemical leakage from the outdoor storage site in the company premises. This was accomplished by replacing their water purification system, which used a chemical-based regeneration method for the ion-exchange resins, to a system that uses an electrical regeneration method.

At the same time, the company installed a wastewater collection system that separates the wastewater generated by the water purification into concentrated wastewater and collection water. The company is now able to reduce the water consumption for the entire factory by 18 thousand m³ per year by reusing the collection water.

The Panasonic Group will continue our efforts to conserve water resources.

Device Solutions Business Division Saga, Panasonic Industry Co., Ltd.

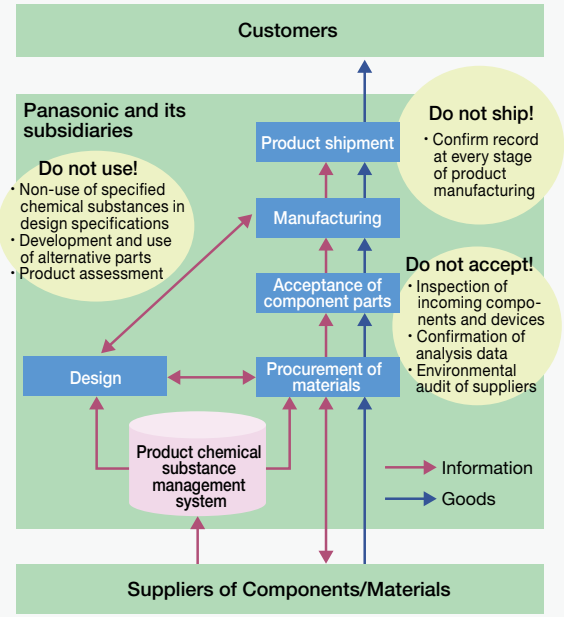

Water purification system with electrical resin regenerator

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, published in 2002 and revised in 2011, 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

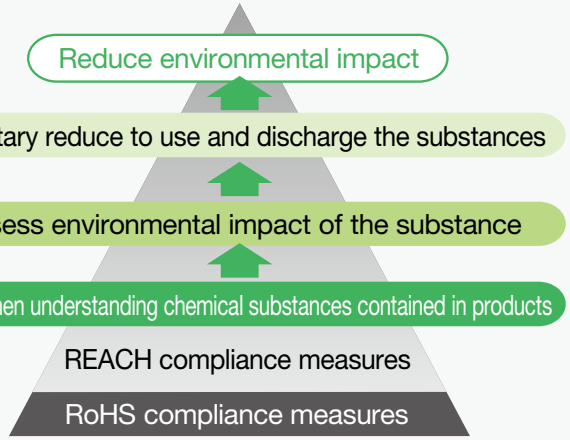


Meanwhile, as represented by the enforcement of the REACH regulation*2 in the European Union, the world implemented measures toward the goals agreed at the World Summit on Sustainable Development (WSSD) held in 2002, which is to produce and use all chemical substances in a manner that minimizes their impact on human health and the environment. The further framework after 2020 is currently under discussion. It is now at the stage of reviewing and summarizing its efforts to date. In support of the precautionary approach proposed in the Rio Declaration made at the Earth Summit in 1992, the Panasonic Group aims at manufacturing products 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 set chemical management in our GREEN IMPACT PLAN 2024 as one of our continuous issues, and we are constantly working to reduce environmental impact from 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 the environmental impact of our products by (1) identifying 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.

*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 types of phthalates (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 RoHS Directive.
The EU End of Life Vehicles Directive details restrictions for vehicles and the EU Battery Directive 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).

WEB **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.; toxic substances whose manufacture etc. is prohibited by Article 55 of the Industrial Safety and Health Act; EU RoHS Directive; and Annex XVII of the EU REACH Regulation. For more details, see the chapter on Specified Managed Substances in the Chemical Substances Management Rank Guidelines (For Products).

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

Social trends

- 1989: The Montreal Protocol entered into force
- 1992: Earth Summit in Rio de Janeiro—Agenda 21
- 1996: Discontinuance of the use of specified chlorofluorocarbons by industrialized countries
- 2002: WSSD in Johannesburg
- 2006: The RoHS Directive entered into force
- 2007: The REACH Regulation entered into force

Panasonic Group — 1990 | 1995 | 2000 | 2005 | 2010 | 2015

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 Discontinue use of the four phthalates specified by the RoHS Directive in new products 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 CO_2 refrigerant and compatible display cases
- 2013: Released air conditioners using new refrigerant R32 with low Global Warmer Potential (GWP) (Japan)

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 use by 75%
  Reduced release and transfer amount by 62% 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 goals set at the WSSD, 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 440 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, the Ministry of Economy Trade and Industry proposed a new scheme to introduce "chemSHERPA," for sharing and exchanging information on chemicals contained in components and products. Because the format adopted for chemSHERPA complies with IEC62474, the international standard on material declaration for the electrical and electronic machinery industry and their products, the 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, we 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, we completed conversion from JAMP format to chemSHERPA by June 2018, when the JAMP format became unusable.

WEB **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 sheet*5 to share information on chemicals used in products in the supply chain, IMDS*6 is actually the de-facto 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 procure electric components to speedily and effectively understand 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.

WEB 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 Chemical Substances in Covered Products below.

WEB Information on the Content of specified chemical substances 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 established a new webpage, Information Based on the Act on the Preventing Environmental Pollution of Mercury, in May 2017.

PDF 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

WEB 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. To date, 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.

PDF Product Safety Assessment Report

https://holdings.panasonic/global/corporate/sustainability/pdf/RCF_Professional_microwave_oven.pdf

Reduction in Use and Discharge of Chemical Substances

Fluorocarbons (CFC) used as refrigerants, insulating materials, and the like for freezers and air conditioners, have properties which are known to cause ozone layer depletion and global warming. Therefore, the Panasonic Group had devoted to develop the technology to use CO_2 as a refrigerant which has extremely low effects on ozone depletion and global warming, and has sold a home water heater using the low CO_2 refrigerant since 2001. Although the low CO_2 refrigerant is suitable for heating to maintain a certain degree of temperature, it was difficult to be used in refrigerators and freezers, especially in large commercial equipment due to insufficient cooling efficiency and size. However, with support from the New Energy and Industrial Technology Development Organization (NEDO), the Panasonic Group developed a refrigeration system using CO_2 refrigerant, and has delivered CFC-free freezers and refrigeration showcases to supermarkets and convenience stores with the CO_2 refrigerant in Japan since 2010. We have also commercialized high-power freezers designed for distribution warehouses and food factories, and have been

expanding their market opportunities with wider scope of their usability from domestic to international.

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.

OCU-CR2001MVF, a fluorocarbon-free freezer using CO_2 refrigerant

FPW-EV085, a display case compatible with a fluorocarbon-free freezer

Window air-conditioner unit with the new R32 refrigerant, CW-HZ180YA

An air-to-water heat pump that utilizes R290 natural refrigerant for residential use

In May 2023, we became the first Japanese manufacturer in Europe to launch new three models of an air-to-water heat pump that utilizes R290 natural refrigerant for residential use, which has extremely low Global Warming Potential (GWP).

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.

List of Our PVC-free Products

https://holdings.panasonic/jp/corporate/sustainability/pdf/eco_pvclist2023.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 RoHS2 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, 2019. We have classified other phthalates as Level 3 Prohibited Substances, and are promoting their substitution.

We worked on creating an analysis and management structure for the four phthalates to ensure 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).

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 Environment 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.

WEB **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

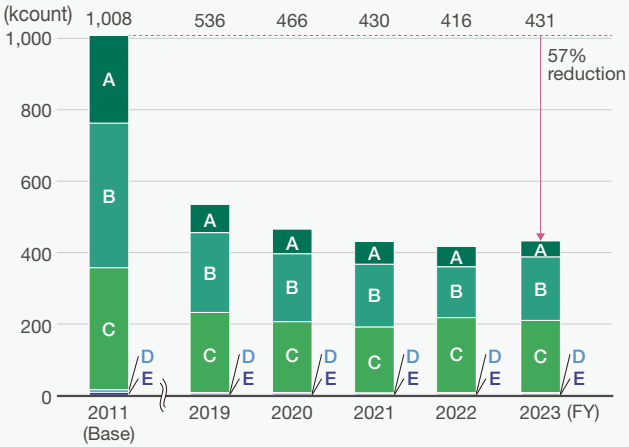
Further, we maintain our compliance in different countries by obtaining the latest information about the various chemical regulations enforced in each country through our regional headquarters and local industrial organizations. As for the VOC regulations amended in China in 2020, we successfully completed 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.

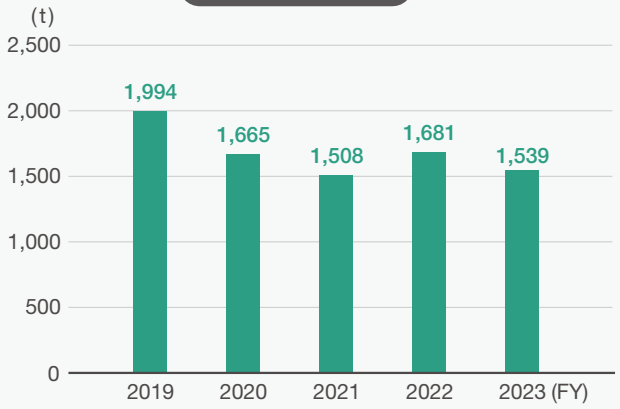
Human Environmental Impact



Note: Overseas sites of former SANYO Electric not included in fiscal 2011.

In fiscal 2023, we were able to reduce Human Environmental Impact by 57% compared to fiscal 2011 by substituting highly hazardous substances in paints, improving yields, promoting recycling, introducing substances with low-solvents and hazards, and improving processes, including reviewing the amount of paint or the number of washing cycles, as well as improving the efficiency of removal/deodorization equipment. We will continue our initiatives to minimize the amount of substances with environmental impact released through our production activities.

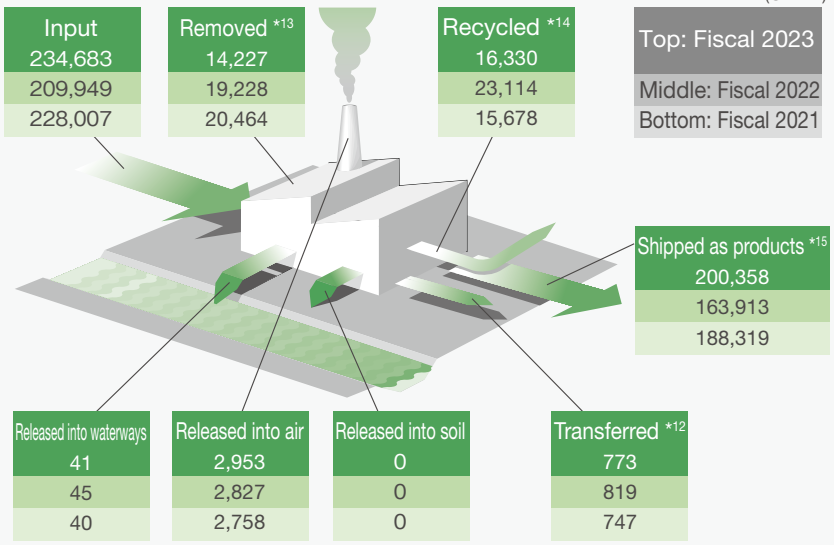
VOC*10 Emissions



*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

(Unit: t)



*11 Based on the Chemical Substances Management Rank Guidelines (for factories). Includes all the substances specified in the Pollutant Release and Transfer Register Act.

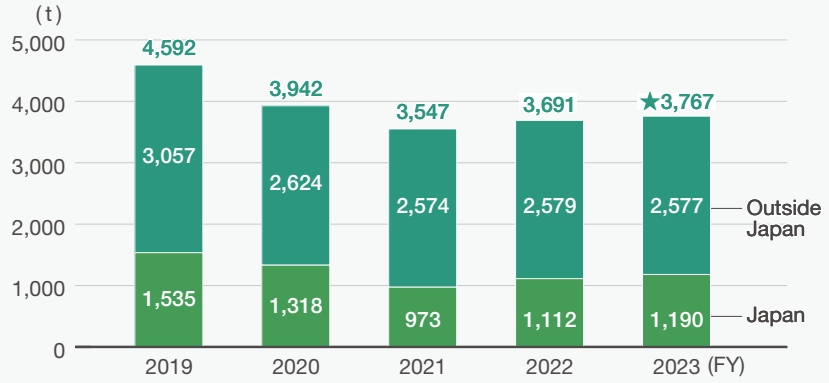
*12 Includes substances transferred as waste, as well as those discharged into the sewage system. Recycled amount which is free of charge or accompanies treatment cost under the Waste Management Law is included in “Recycled.” (Different from the transferred amount reported under the PRTR Law.)

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

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 CO_2 emissions, resource recycling, chemical substance management, and biodiversity conservation.

Activities for Green Procurement

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 goods in order to materialize the targets in supplier collaboration with our Group. In addition to cooperation in ‘reducing environmental loads 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. In September 2019, 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.

We also published “Panasonic GREEN IMPACT” in 2021, regarding information about our contribution to CO_2 emissions reduction from Panasonic Group’s business activities and from society in general, indicating our determination by setting our own targets to achieve both ‘a better life’ and ‘a sustainable global environment’ at the same time. We plan to expand this effort across the entire supply chain.

In response to more stringent and expanded regulations such as EU RoHS Directive, the Panasonic Group has been engaging in continual environmental quality assurance audits of our suppliers since 2005 to improve the management level throughout the entire supply chain. In fiscal 2023, we conducted the audits at some 800 suppliers and have supported their efforts to upgrade their management levels.

WEB Green Procurement Standards

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

Estimation 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 2022 data is 21.55 Mt, roughly 12 times the GHG emissions of our 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).

Sharing Achievements through Collaboration with the Panasonic Group

Since fiscal 2010, the Panasonic Group has been implementing the ECO-VC Activity[*2] Activity with our suppliers. This program is a collaboration between the Panasonic Group and our suppliers, aimed to both reduce environmental impact as well as reinforce product capability and achieve further rationalization for the Panasonic Group products and suppliers. In fiscal 2010, the target for reducing environmental impact was limited to energy saving (CO_2 emission reduction). However, this was extended in fiscal 2011 to Recycling-oriented Manufacturing aiming at saving resources and using recycled materials. The geographical range of our activities has also extended. Initially centered in Japan, actions accelerated to China and other parts of Asia in fiscal 2013, and later extended to a global scale in fiscal 2015.

We have stored case examples of ECO-VC Activity 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 ‘ECO-VC Activity award 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 (CO_2 emission reduction), cost reduction, resources conservation and use of recycled materials in fiscal 2019. Starting in fiscal 2024, we plan to work together with our suppliers to promote decarbonization and reduce CO_2 emissions in conjunction with the Panasonic Green Impact.

*2 ECO-VC Activity: Value Creation Activities

Environmental Achievements Made through Proposals

Items	FY2019	FY2020	FY2021	FY2022	FY2023
Number of proposals	820	772	430	332	264
CO_2 reductions derived from proposals	30.50 kt	280 kt	110 kt	50 kt	80 kt
Use of recycled resources derived from proposals	80 t	100 t	5 t	1500 t	600 t
Reduction in resources used derived from proposals	3.03 kt	19.9 kt	323 kt	255 kt	40 kt

Collaboration with Environmental NGOs

For exhaustive implementation of CSR throughout our global supply chain, we are implementing activities in collaboration with overseas environmental NGOs.

In China, where the Panasonic Group has a large number of suppliers and where commitments by suppliers to environmental issues have been highly demanded by society, we have diligently ensured compliance with China's laws and regulations and conduct responsible procurement throughout the supply chain, working together with environmental NGOs.

In September 2016, the Panasonic Group held seminars for about 400 suppliers on our CSR Procurement Policy and Chinese environmental regulations in Guangzhou, Dalian, and Shanghai. In the seminars, we asked suppliers to take necessary actions in response to China's latest environmental regulations, in addition to ensure CSR in supply chain. In such way, we have been working on to understand possible risks and to reduce environmental impact in our supply chain.

Since 2018, we have conducted on-site environmental audits which focus on response capabilities and CSR audits at the same time in some 20 suppliers per year since fiscal 2019. To ensure responsible procurement, we have been working on reduction of environmental impact collaborating with suppliers, ensuring from a request for the improvement items pointed out by audits to a confirmation of implementation of such improvements. Through on-site environmental and CSR audit, we will ensure compliance with relevant laws, social norms and corporate ethics.

We will also promote procurement to fulfill social responsibilities such as human rights, labor, safety and health, and global environmental conservation together with suppliers.

In addition, collaborating with the Institute of Public & Environmental Affairs (IPE), a China's environmental NGO, we have been working on to improve suppliers CSR environment, through sharing information on latest laws and regulations in a periodical working group meeting, and requesting for suppliers whose regulatory violation is recorded on a monthly base to improve it.

In the Suppliers Green Supply Chain responsibility rating (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. We were ranked the third best in the CITI ratings and the top in the CATI ratings for the home appliances industry (33 brands) in fiscal 2023.

*3 CITI : The Green Supply Chain Corporate Information Transparency Index
*4 CATI : The Corporate Climate Action Transparency Index

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		
	1979		• Second oil shock occurred	• Energy Conservation Law enacted
1980s	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		
1990s	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
	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
	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	• 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
		• Panasonic Center Osaka opened • Eco & Ud HOUSE opened • 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	• 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	• Restriction of Hazardous Substances (RoHS) Directive took effect in EU	• 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	• 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	• 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 CO_2 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	• '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	• Established the Corporate CO_2 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	• G20 (conference of key countries' environmental and energy ministers) held • Hokkaido Toyako Summit held	• 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	• Opened the 'eco ideas' House to demonstrate a lifestyle with virtually zero CO_2 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	• China WEEE law promulgated • New framework for countermeasures against global warming on and after 2013 (post-Kyoto Protocol), the Cophenhagen 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	• 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	• 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	• 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	• 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
	2011	• 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	• 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)	• 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	• 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)	• 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	• 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	• 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)	• Phase I of the Kyoto Protocol ends. Japan's target expected to be achieved in combination with forest CO_2 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	• 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 CO_2 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)

Era	Year	Panasonic Group	World	Japan
	2014	• 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)	• 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" • 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"	• 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
	2015	• 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 CO_2 emissions • Announced the Tsunashima Sustainable Smart Town development project, together with Yokohama City and Nomura Real Estate Development Company	• 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)	• 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	• 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	• 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	• 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

Era	Year	Panasonic Group	World	Japan
	2017	• Announcement of Panasonic Environment Vision 2050 • Opening of Tsunashima Sustainable Smart Town	• France, UK, and China announced the prohibition of sales of gas and diesel cars and the conversion to EVs in the future	• Revision of the Charter of Corporate Behavior delivering on the SDGs through the realization of Keidanren Society 5.0
	2018	• Announcement of Monozukuri (Manufacturing) Vision • Achievement of zero-CO_2 factories at Panasonic Eco Technology Center Co., Ltd. (PETEC), Panasonic Energy Belgium N.V. (PECBE), and Panasonic do Brazil (PANABRAS)	• COP24 was held. The policy based on the Paris Agreements to be uniformly applied to all member countries was adopted	• The fifth Basic Environment Plan was decided by the Cabinet. Set up six cross-field strategies utilizing the concepts of SDGs
	2019	• Announcement of Green Plan 2021 • Participation in 'RE100', an international initiative for the use of 100% renewable energy as electricity used in business operations	• 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	• G20 Osaka Summit was held. "Osaka Blue Ocean Vision", which aims to further reduce pollution caused by marine plastic wastes, was shared
2020s	2020	• 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 sustainablity get together to discuss related topics. • Achieved zero-CO_2 factory in PEC (Wuxi) in China.	• Countries accelerated their decarbonization efforts and subsequently announced carbon neutrality statements. • EU released a new battery regulation proposal.	• Announced carbon neutrality by 2050. • Formulated "Green Growth Strategy Through Achieving Carbon Neutrality in 2050."
	2021	• Environment Vision transformed to GREEN IMPACT. • Set up Sustainability Management Committee led by the Group CEO.	• COP26 was held in UK. Countries agreed to aim for 1.5°C target for global warming.	• 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	• 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 zero carbon at all its sites worldwide.	• 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.	• 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)'.

Respect for Human Rights

As a comprehensive electronics manufacturer, Panasonic Group develops, produces, sells, and provides services in relevant sectors through close cooperation with Group companies in Japan and abroad. Our business activities all depend on the support of many people, including our Group employees, customers who use our products and services, suppliers involved in procurement and sales, and our business partners. Therefore, our business activities may impact them positively or negatively. Under our management philosophy that “a company is a public entity of society,” we recognize that we cannot allow ourselves to develop the expense of these people, and that we have a responsibility to protect their rights and contribute to the well-being and and happiness of these people.

Furthermore, as a global company operating worldwide, 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. We strive to prevent, mitigate, and correct any possible negative impact our business activities, products, services, or related translations have on individuals, workers, and society.

We also seek our suppliers and business partners to understand and implement our human rights and labour compliance policies; in cooperation with our partners, we strive to monitor supply chain risks and take appropriate measures to prevent, mitigate, and correct the occurrence of such risks.

Specifically, we address the following issues:

- Formulating and reviewing human rights policies;
- Raising awareness on human rights;
- Conducting human rights due diligence;
- Responding to human rights risks in the supply chain;
- Establishing and operating grievance mechanisms;
- Engaging with stakeholders.

We also seek the advice of external experts in our human rights efforts.

Respect for human rights is one of the utmost material sustainability issues to the Group. For more details, see the “Materiality” section (on page 6).

Policy

Panasonic Group established the Panasonic Group Human Rights and Labour Policy (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, and correcting human rights violation risks; 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 fulfill 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 Core Conventions

WEB **Panasonic Group Human Rights and Labour Policy**
https://holdings.panasonic/global/corporate/sustainability/social/human-rights/policy.html

WEB **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 will periodically review and improve these policies based on the opinions of external experts, relevant stakeholders, and their representatives.

Responsible Executive and Framework

The executive officer responsible for the Group's initiatives to respect human rights is the Group Chief Human Resources Officer, who is also in charge of the CSR and Corporate Citizenship Activities (as of August 2023). Our operating officers' remuneration are linked to relevant KPIs which reflect their responsible filed in sustainability.

In fiscal 2024, human rights and labour compliance initiatives is a part of our short- and medium-term performance-linked compensation metrics for Group CHRO. The Sustainability Management Committee, chaired by the Group CEO, discusses crucial human rights issues and reports them to the Group Management Committee and the Board of Directors. The Board of Directors also oversees these issues. In fiscal 2023, compliance on mandatory human rights and labour requirements in various countries has been discussed at the sustainability management committee.

In fiscal 2024 (continued from fiscal 2023), we identified fraud and misconduct on human rights by suppliers and outsourcing partners as a major Group risk. Each business unit is working to reduce this risk. For more on risk management, see the "Risk Management" chapter (on page 130).

We established the Strategic Human Resources Department within Panasonic Holdings Corporation (PHD) to promote our day-to-day efforts to respect human rights and oversee the Group's human rights and labour initiatives. It works with Group companies to promote initiatives at business sites across the Group.

When it comes to human rights in our supply chains, procurement divisions take initiatives for respecting them and they gain the understanding and cooperation from our suppliers all around the world in line with our Group-wide human rights initiatives.

For more details, see the "Responsible Supply Chain" chapter (on page 102).

Internal Training & External Communications

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. In fiscal 2023, following the revision of the Code of Ethics and Compliance, we provided trainings for all employees, with 150,000 taking part. Furthermore, starting in fiscal 2023, the Human Resources Division, a critical relevant division, added human rights and labour compliance as a basic training elective for Group HR employees in Japan. We plan to update the content of this module and keep it for fiscal 2024. We also provide Pre-Overseas assignment Training for employees, including managers, posted from Japan to overseas subsidiaries, on international standards and the laws of each country regarding corporate responsibility to respect human rights. Additionally, in Southeast Asia, where many of our manufacturing companies are located, personnel from the PHD Strategic Human Resources Department have conducted direct training in Malaysia and other countries for managing directors and human resources managers at manufacturing sites.

We also publish the Panasonic Group Human Rights and Labour Policy in Japanese and English on our website and ask all our suppliers to respect human rights as part of our Panasonic Supply Chain CSR Promotion Guidelines. For more details, see the "Responsible Supply Chain" chapter (on page 102).

The Panasonic Group's 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

The Group is committed to respecting the human rights of the stakeholders in its business activities, products and services, and transactions, based on the United Nations' Guiding Principles on Business and Human Rights, referring to the OECD Due Diligence Guidance for Responsible Business Conduct. We conduct human rights due diligence to identify, prevent, and mitigate any adverse impact our operations could have on human rights, correct issues that may arise, and explain the results of our actions to relevant stakeholders. We incorporate input from external experts and stakeholders in formulating related mechanisms and processes.

The Group recognizes the need to identify human rights issues throughout its value chain and business activities and has begun analyzing priority issues. As we operate globally in a wide range of business area, some of our businesses have extensive supply chains and we recognize the risk that workers in these supply chains may be in vulnerable positions or unsafe working environments in different countries or regions. Therefore, we begin by addressing human rights issues at our manufacturing sites and in our supply chain. For more details, see the "Responsible Supply Chain" chapter (on page 102).

In fiscal 2022, we conducted a detailed self-assessment of human rights and labour issues at almost all of our overseas manufacturing companies to gain a bird's eye view of the Group's risks. The questions we asked referenced the self-assessment metrics from the Responsible Business Alliance (RBA) that applied to the Group. Through this process, we gained a general understanding of human rights and labour issues. However, we recognized that we need a more detailed understanding of issues to quickly address them.

In light of this recognition, in fiscal 2023, we reviewed and added questions to our list before conducting another detailed self-assessment of some domestic manufacturing sites that were selected by our Group companies alongside our overseas manufacturing companies (for a total of 127 companies and sites). As a result of this survey, we identified 96 issues at 38 companies.

Sample issues:

- Inadequacies in contracts between companies and recruitment agencies for employing foreign workers;
- Insufficient fire alarms and similar devices installed in dormitories for foreign workers;
- Overtime by young workers;
- Hiring and promotion processes which may cause discrimination

To address these issues, the relevant companies and sites has formulated improvement plans by August 2023. Panasonic Holdings Corporation (PHD) will provide support, as appropriate, to complete the corrective measures by March 31, 2024.

In fiscal 2024, we will target all domestic manufacturing sites to identify and correct potential and present human rights issues.

Please see the "Responsible Supply Chain" chapter (on page 102) for our approach to human rights due diligence in the supply chain.

We will operate the system by building and making continuous improvements through dialogue, discussion, and cooperation with relevant stakeholders both internally and externally. We will also make disclosures about initiatives as appropriate using our official website, relevant reports, and other means of communication.

Major Initiatives

Prohibiting Child Labour and Protecting Young Workers

Our Human Rights and Labour Policy includes a clear expectation to work toward the effective eradication of child labour.

When we hire employees, in addition to complying with all applicable laws, we also require the staffing firms, suppliers, and other companies we work with to do the same.

We also do not permit any midnight work, heavy labour, or dangerous labour for employees under 18 years old.

Providing Employment Opportunities to Young People

We provide young job seekers with career education, human resource development with industry-academia collaboration, and employment opportunities through internships and other programs. In Japan, we run several internship programs throughout the year through industry-university cooperation. These internships have the following three goals:

- To train human resources through industry-university cooperation
- To provide an opportunity for learning through work experience focused on career education
- To eliminate employment mismatches by verifying work appropriateness

All our Group companies in China also offer internship programs and accept university students at business sites during their long holidays. These programs provide opportunities for students to learn about real business challenges and to propose ideas for solutions.

Efforts to Protect the Rights of Children

Through the programs below, we show respect for the human rights of children and supports their healthy growth.

- Programs supporting employees raising children
WEB https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/support-worklifebalance.html
- Providing products that support people raising children
WEB https://holdings.panasonic/global/corporate/universal-design/products/declining_birth_rate.html
- Safe and secure, child-friendly product design that is conscious of healthy development (Japanese only)
PDF https://www.panasonic.com/jp/corporate/technology-design/ud/pdf/KIDSDESIGN_pamphlet2021.pdf
- Corporate citizenship activities that safeguard and support the rights of children We are committed to fostering the next generation through corporate citizenship activities, such as funding scholarships and offering career education programs.
- Details on corporate citizenship activities
WEB https://holdings.panasonic/global/corporate/sustainability/citizenship.html

Furthermore, with the spread of COVID-19, we are rolling out new initiatives, including support for at-home learning, mental health care and donations to related NPOs to assist children impacted by the state of emergency.

- Support for at-home learning: Panasonic Kids' School (Japanese only)
WEB https://holdings.panasonic/jp/corporate/sustainability/citizenship/pks/ouchide.html

Responsible recruitment and employment

Our Human Rights and Labour Policy includes a clear prohibition of "any and all forms of forced labour." 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. In light of this recognition, while Panasonic Group respects the human rights of such workers, we promote efforts to establish a recruitment and employment environment free from forced labour and unfair treatment, following all applicable laws, regulations, and internal rules and referencing international standards and guidelines the ILO and other organizations established.

For example, in Malaysia, based on the expert advice, technical support, and training delivered by the International Organization for Migration (IOM), UN Migration Agency, and other experts, management and human resources managers of our group companies in Malaysia formulated policies and standard operating procedures for the ethical recruitment and employment of foreign migrant workers. Through identifying and remediating issues by checking the on-site operational status of policies and manuals, they are working to establish compliance related to human rights and labour. Some specifics from this policy are as follows:

- Prohibiting companies from retaining passports and other personal documents;
- Prohibiting employees from paying recruiting and hiring fees;
- Providing safe and sanitary dormitories.

For countries with potential risks, the PHD Strategic Human Resources Department personnel interview each manufacturing company about their efforts and use their experience in Malaysia to provide advice on and check the status of corrective measures. In fiscal 2023, they provided advice and guidance in Singapore and Taiwan.

In the supply chain, we make similar requests to our suppliers through the Panasonic Supply Chain CSR Promotion Guidelines. For more details, see the "Responsible Supply Chain" chapter (on page 103).

Prohibition of Discrimination

Our Human Rights and Labour Policy includes the elimination of 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, labour union affiliation, veteran status, or any similar status or characteristic. We also strive to raise awareness of this prohibition. By doing so, we are working on creating workplaces where it is possible for diverse talents to form critical partnerships with mutual respect and work together dynamically.

In Japan, we are engaged in the following efforts to prevent sexual discrimination, including sexual harassment, as well as harassment based on power differentials, and to comply with the Act for Eliminating Discrimination against Persons with Disabilities in order to create a more fair, equal, and pleasant workplace:

- Establishing, publishing, and thoroughly implementing sexual harassment policies
- Distributing leaflets and manuals on sexual harassment
- Holding seminars and training on preventing sexual harassment and harassment based on power differentials, and workplace culture revitalization
- Conducting management-level harassment training
- Running LGBTQ-related training
- Distributing educational materials to help employees understand the difficulties of and necessary considerations for people with disabilities

About hiring decisions

We work to continuously improve awareness with reference to the laws and guidelines for each country and make sure we apply them consistently based on the appropriateness, ability, and desire of the candidate. After identifying issues, 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 includes our effective approval of freedom of association and the right 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 will pursue ways to respect internationally recognized human rights principles at our locations in countries that do not legally permit the formation of labour unions.

In Japan

PHD and each Group companies have stipulated in their collective agreements concluded with the labour unions representing PHD and Group company employees that unions retain the right to organize, collectively bargain, and strike, as well as prohibitions on discrimination against union members and interference with union activities. The labour union membership rate among non-management employees is 97.2%.

Based on a common understanding that the Company's sound development, improvements in labour 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 labour and management. The Company and the Union discuss essential management matters in Labor-Management Council.

In Europe

Following an EU directive* adopted in 1994, we have set up a voluntary labour agreement to provide a venue for healthy discussion between labour 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.

*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 labour-management consultation committee.

In China

Nearly all Group-affiliated companies in China have labour unions (gōnghuì). We hold regular opinion exchanges and discussions surrounding compensation, welfare and benefits, training, and the like through initiatives including periodic labour-management dialogues, proactive joint labour-management recreational events, and advance briefings to unions concerning critical management decisions, with a focus on building good relations between labour and management.

Occupational Health and Safety

Support for ensuring a safe work environment and promoting physical and mental health is also a priority, as stipulated in the Human Rights and Labour Policy. Please see "Creating a safe, secure, and healthy workplace" in the "Employee Well-being" chapter (on page 83).

Managing Working Hours

We have included provisions in our Employee Handbook related to proper management of working hours, break times, overtime work, holidays, leave, and other matters based on labour laws in each country and labour-management agreements (e.g. collective bargaining agreements).

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 eradicate long working hours for all employees, including managers and supervisors.

We also provide employees with more annual paid leave than legally required, and they may accumulate up to 50 days of leave. Our system has been improved in terms of flexibility to accommodate individual needs for using annual leave, including not only having no restrictions on the purpose of the leave, but also making hourly or half-day leave available to all employees regardless of work style.

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 labour, labour-management agreements (such as collective agreements), and the like.

We also establish company regulations 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 pays employees directly for an agreed-upon period at agreed-upon time and provides employees with notifications of pay through pay statements or electronic data.

Furthermore, in countries and regions where the law permits monetary penalties, we recognize

and allows these penalties as an option of disciplinary action. However, this permission is predicated on the penalty procedures and amounts being set within legal limits and within the limits of reasonable impact on the livelihood of those penalized, as well as such measures being codified in internal regulations and made well known to employees.

Grievance Mechanism

In order for us to respond quickly to remedy any complaints we receive related to human rights violations, we established a global hotline (supporting 32 languages) as a point of contact where our employees or external business partners and their employees can report any compliance violations they have become aware of, including those issues involving human rights or labour. This hotline uses an external, independent system that prevents the identity of the internal or external person reporting being revealed, and we have internal rules in place such that we are careful to protect the confidentiality of such reports and to make sure that the person reporting the violation does not suffer any acts of retaliation and detrimental treatment.

For more details, see the “Whistle-blowing System” in the "Business Ethics" chapter (on page 138).

In addition, to encourage wider acceptance of complaints from outside our group, we joined the new industry joint grievance system established in October 2022 by the Japan Electronics and Information Technology Industries Association (JEITA) CSR Committee.

WEB 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. In addition to declaring 10 fundamental principles in four different fields, including respect for human rights, we are working to make our efforts related to human rights and labour reference international standards, and we fulfill our duty to communicate with the public by disclosing the progress and results of those efforts.

We also joined the Responsible Business Alliance (RBA)—an international CSR organization involved in the electronics, ICT, and automotive sectors—in October 2021. We are working to develop a highly reliable management system by their excellent self-assessments tools, the guidance document for solving of issues and participation in their affiliated, Responsible Mineral Initiative for the promotion of responsible mineral procurement.

Panasonic Group is working to build a highly reliable management system through the above efforts.

WEB United Nations Global Compact
https://www.unglobalcompact.org/what-is-gc/participants/149557-Panasonic-Corporation

WEB Responsible Business Alliance (RBA)
https://www.responsiblebusiness.org/about/members/

Employee Well-being

Panasonic Group is committed to realizing happiness and job satisfaction by creating a work environment where every Employee* 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. As expressed in the words of our founder, “A business is people,” nurturing and motivating the precious “people” society entrusts to us is the foundation of our management. To this end, we envision being “the best place to work where diverse talents work at their best,” regardless of gender, age, nationality, or any other differences.

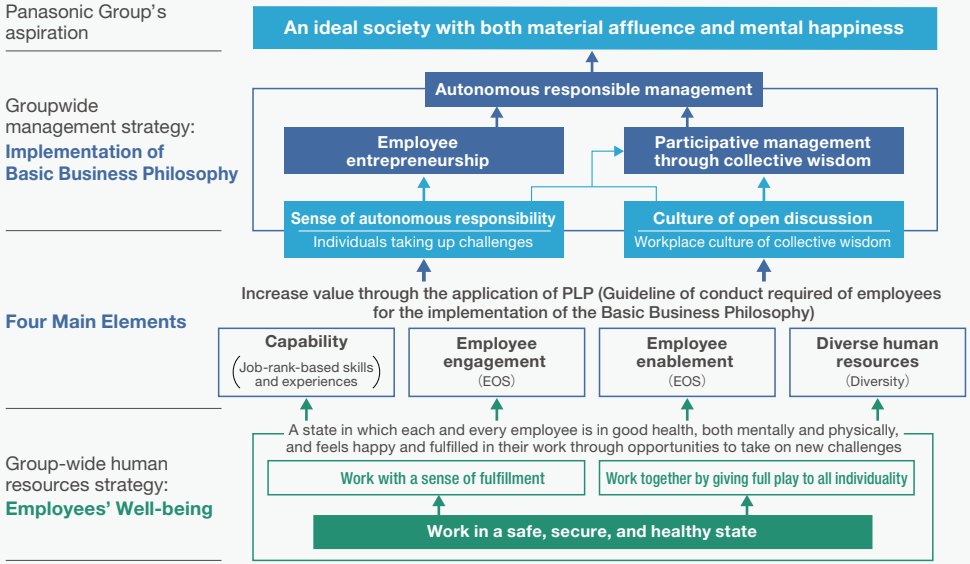
Within this section, the following list of stakeholders are collectively referred to as “Employees”: (1) all regular and contracted employees having employment relationships with any Panasonic Group company: (2) all temporary staff and seconded employees working under the control and supervision of any Panasonic Group company; and (3) 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

Since its founding, the Group has valued the concept of human capital management, which regards human resources as vital capital. We call the approach “autonomous responsible management,” which consists of “employee entrepreneurship,” which has individuals take on challenges based on their personal sense of responsibility, and “participative management through collective wisdom,” which asks people to share their wisdom by telling others what needs to be said. We implement this Basic Management Philosophy throughout the Group to improve the competitiveness of our Operating Companies, helping us realize our Group’s purpose of “building an ideal society with both material affluence and mental happiness.”

We have established the “Panasonic Leadership Principles (PLP)” (see below) as a code of conduct for our members to further implement the Basic Management Philosophy, and through concrete action, we create higher added value for society. The four key elements that enhance this added value are “capability (ability development at each level),” “employee

engagement (a willingness to take on challenges),” “employee enablement (an environment where employees can best leverage their abilities and work comfortably),” and “diverse human resources.” The source of these elements is “employee well-being,” a state in which every individual is healthy in mind and body and feels happy and fulfilled through challenging opportunities. This concept is the starting point for our “autonomous responsible management.” Realizing employee well-being is an aim of our Groupwide HR strategy, through which we create added value and work under the three pillars of ensuring that our members can work “in a safe, secure and healthy state,” “with a sense of fulfillment,” and “together by giving full play to all individuality.” We monitor our added value using productivity indicators based on financial indicators.

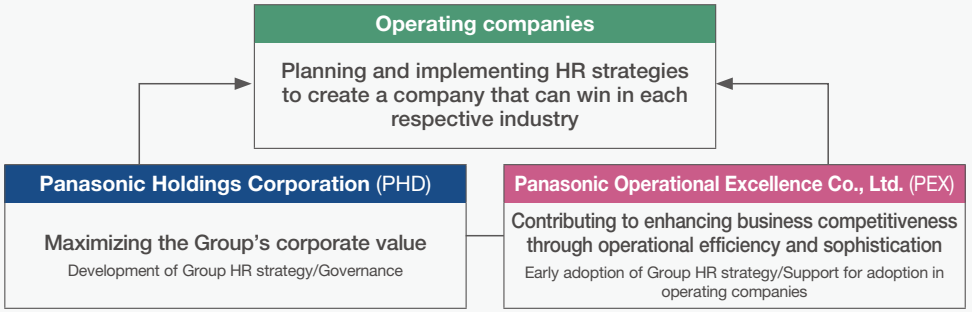


The first pillar, “work in a safe, secure and healthy state”, literally means to promote a safe, secure, and healthy workplace. The second pillar, “work with a sense of fulfillment”, means to encourage employees’ self-motivated endeavors and support their self-determined career formation. To encourage each individual to take on challenges through work, we will promote the exchange of human resources among the Group’s operating companies through open recruitment. In addition, to create opportunities for individual self-realization, along with various skill development programs, we are expanding options of time and place to work including moonlighting for other companies. The third pillar, to work “together by giving full play to all individuality”, means promotion of Diversity, Equity & Inclusion (DEI). This promotion is based on Panasonic Group DEI Policy with three perspectives (top management commitment, creation of an inclusive work environment, and support for every individual).

Responsible Executive and Framework

The executives responsible for creating and promoting the Panasonic Holdings Corporation (PHD) and Groupwide HR strategy are the Group Chief Human Resources Officer (Group CHRO) and the executive officers in charge of DEI promotion. 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 build an optimal business structure for the industry, customers, and competitors it faces under thorough compliance with the concept of autonomous responsible management. Accordingly, each Operating Company is responsible for optimizing the planning and execution of human resource strategies, including acquiring human resources, compensation and evaluation systems to improve performance, organizational development to support business strategies, and promoting human resource development. Meanwhile, PHD is responsible for supporting the Operating Companies from the perspective of the Group’s common HR strategy and governance. Panasonic Operational Excellence Corporation also assists the Operating Companies by providing instruction and support on implementing the Group’s HR strategy.



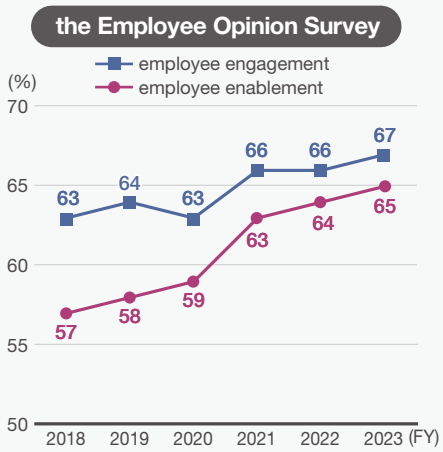
Key Groupwide Indicators

To realize the “employee well-being” defined above, the Group has established key indicators linked to the three associated pillars. Specifically, these indicators are employee engagement, employee enablement, the ratio of female managers (in Japan), and the number of occupational accidents.

The employee engagement and employee enablement indicators represent the affirmative response rate (%) as measured in the Employee Opinion Survey (“EOS”). The EOS is an annual survey of all global employees (approximately 150,000 respondents in fiscal 2023) that serves as a benchmark for measuring employee perceptions. The survey results have been trending

upward yearly, with employee engagement at 67% in fiscal 2023 (66% in the previous year) and employee enablement at 65% (64% in the previous year) *. We will continue our efforts toward ensuring those three pillars, aiming to achieve the highest global standard.

Furthermore, the ratio of female managers (in Japan) was 6.1% (5.4% in the previous year). We will continue to promote DEI and aim to ensure diversity in the management ranks by promoting more women to management positions.



The occupational accident figures included no accidents causing death Groupwide, continuing from the previous year, and three accidents involving serious injury or property damage in Japan and five such accidents abroad (down from four and six, respectively). We will continue to promote safe, secure, and healthy workplaces to eliminate fatal, dangerous, and destructive accidents.

The questions used to measure employee engagement and employee enablement are as follows:

● Employee Engagement (specific questions)
- The company motivates me to do more than is required.
- I feel motivated to do more than is required of me.
- I feel proud to work for the company.
- I would recommend the company as a good place to work.
- Given your choice, how long would you plan to continue working for the company?

● Employee Enablement (specific questions)
- My job makes good use of my skills and abilities.
- My job provides me with the opportunity to do challenging and interesting work.
- Conditions in my job allow me to be about as productive as I can be.
- There are no significant barriers at work to doing my job well.

Implementation of Basic Business Philosophy

In 2016, the Group introduced “Panasonic Global Competency (“PGC”)” as its common code of conduct, embodying the Basic Management Philosophy. Following the first revision of the Basic Management Philosophy in 60 years, we revised the PGC as “Panasonic Leadership Principles (“PLC”)” in April 2023. The PLP is a Groupwide code of conduct to help all members put the Basic Management Philosophy into practice. In the future, we will work to link the PLP with human resource management policies—including recruitment, training, evaluation, appointment, and assignment—at each Group company.

Panasonic Leadership Principles

As individuals brought together by the Panasonic Group, regardless of whether or not we are managers responsible for a team, each of us shall provide leadership and contribute to efforts to use the collective wisdom of all individuals toward the realization of an ideal society with richness both in matter and mind. To this end, we will continuously review and improve the Panasonic Leadership Principles that serve as our guidance for acting accordingly every day throughout the Panasonic Group.

PLP	Expected Behavior
Customer Focus	We shall always think from a customer’s perspective. In order to keep customers happy, we will deeply understand the potential problems that they have yet to identify, look ahead to their ideal future, and continue to take actions that far exceed their expectations.
Drives Vision	Without being bound by the status quo, we shall boldly envision our ideal future beyond the imagination of others around us. Even if it seems difficult, we will never give up and work toward the achievement of an ideal future while exploring all the possibilities.
Builds Trust	With the awareness that we are members of society, we will gain trust by acting in good faith without arrogance. We shall not neglect even the smallest details and always do what is right for society in mind. Moreover, we will humbly learn from all affiliates, cooperate with them, and enhance each other through respectful dialogue, aiming to achieve social progress.
Strategic Thinking and Behavior	We shall detect signs of change without being preoccupied with the matters at hand, thereby seeing the big picture of society and thinking flexibly. We will not make rash decisions or take a short sighted approach such as thinking about actions to be taken based on the status quo, and will always promote and practice mid to long term thinking. We will open up new business opportunities by always taking interest in social and technological progress and by evaluating and honing our skills, which will serve as our strengths in an endeavor to keep ahead of changes.
Best Work Processes	Without being satisfied with the status quo, we shall promote the visible measurement of productivity in all situations, thoroughly pursue such an effort, and achieve results, which will always make us proud that our work offers the world's best quality. To this end, we will consider the status quo as a decline and continue to boldly improve any unsatisfactory work processes without hesitation.
Ownership	No matter how menial our tasks may seem, we will be aware that we are the managers of our own jobs and act accordingly. We will find meaning in each task and never say, "That's not my job." We will continue to act with a sense of autonomy for our happiness and that of the organization as well as the well being of all individuals concerned.
Evolution	We will not depend on our current capabilities and experience , but will continue to expand our horizons, learn, and change. Instead of being bound by convention and making excuses about why we cannot pursue these objectives, we will explore ways to achieve them. We will become challengers rather than bystanders or critics and support the challenges of others around us.
Harmonizes Wisdom	In order to create more wisdom, we shall listen to other parties' opinions with an open mind and say what needs to be said with respect for them. We will promote rapid and optimal decision making without fear of disagreement with others.
Welcomes Uniqueness and Differences	We shall consider differences as strengths, and welcome diversity and use it to our advantage to create new value. We will become aware of our preconceptions and biased views and promote fair decision making independent of such ways of thinking.
People First	We shall explore and achieve an ideal state through daily practice and humble reflection. We will not force our opinions and methods on team members, but believe in their potential and fully trust them to do a job. When performing tasks, we will make it a top priority to ensure the health and safety of ourselves and team members. We will look after and help each other to establish a pleasant work environment for all team members.
Drives Results	We shall be keenly aware of our roles and missions, and always confirm the goal to be achieved and the degree to which we have realized it. We will never overlook our behavior when it runs counter to our achievement. No matter how difficult the challenge we face, we will fearlessly take prompt action to ensure the achievement of results.

Work in safe, secure and healthy state
～Creating a safe, secure, and healthy workplace～

The Panasonic Group's policy is to ensure the health and safety of employees (including those employed by subcontractors, staffing agencies, and the like) in accordance with the Panasonic Group Code of Ethics & Compliance ("Code of Ethics & Compliance") that was created and is maintained by the Board of Directors of Panasonic Holdings Corporation and the Panasonic Group Occupational Health and Safety Policy communicated by the Group CEO. The Group's Occupational Health and Safety division has also translated these into English and Chinese, and we work to ensure the health and safety of employees by rolling them out at all group companies in the language corresponding to the needs of each workplace. We also strive to ensure the safety of all persons not affiliated with Panasonic when they visit our workplaces.

WEB **Panasonic Group Code of Ethics & Compliance**
1.Respecting each other, 2. Safeguarding health and safety, Chapter 2. Our Workplace
https://holdings.panasonic/global/corporate/about/code-of-conduct/chapter-2.html

WEB **Panasonic Group Human Rights and Labor Policy**
https://holdings.panasonic/global/corporate/sustainability/social/human-rights/policy.html

WEB **Panasonic Group Occupational Safety and Health Policy**
https://holdings.panasonic/global/corporate/sustainability/social/health-and-safety/policy.html

To put these policies into practice, we have established Health and Safety Management Rules that apply to health and safety management for the Group, build a foundation for health and safety management activities with the aim of both preventing workplace accidents and maintaining or improving the health of employees so that they can contribute to business development, and those rules apply to all work performed at business sites within the Panasonic Group. Additionally, we promote efforts to prevent harassment and ensure 100% compliance with the laws and regulations of each region.

■ Creating a safe and secure workplace

Risk assessment initiatives (in Japan)

The Panasonic Group conducts regular risk assessments at least once annually for mechanical equipment, chemical substances, and the like according to the Occupational Health and Safety Act in order to identify hidden risks such as the potential for workplace accidents, injuries or illness and reliably reduce the risks in order of greatest priority. We also share case studies from past incidents within the Group on the Group's intranet, and each Operating Company takes steps toward preventing such accidents from happening again. Each of our business sites in Japan has a Health and Safety Committee composed of both employees and management and which is charged with investigating measures to prevent danger to workers, measures to prevent the causes and recurrence of workplace accidents, measures to prevent damage to workers' health, measures to promote the maintenance or improvement of workers' health, and other similar topics. To prevent workplace accidents among contractors' employees operating on our premises, we also hold Health and Safety Meetings with those contractors operating on our premises and manage health and safety overall, including facilitating communication between operations and the like.

Promoting external certification

◇ ISO45001

Workplaces within the Panasonic Group are working to obtain ISO 45001 certification, a process which involves clarifying the roles of all employees using the standard, setting goals and driving health and safety activities forward while also conducting regular reviews by the head of the business site, revising those activities based on those reviews. As of the end of 2022, 143 out of the Group's 200 manufacturing sites globally have obtained ISO 45001 certification, and 17 work sites are going to transition to ISO 45001 certification from OHSAS 18001 or other standards.

◇ Outstanding Organization for Health and Productivity (in Japan)

In the Japan, the Group has been working on efforts toward being recognized as an Outstanding Organization for Health and Productivity by the Ministry of Economy, Trade and Industry, and each of the Operating Companies in the region were able to join the tradition of this recognition passed on from the former Panasonic Corporation that was recognized in March into the Operating Companies starting in April. The Panasonic Group views measures crucial to health management in the spirit of a company where everyone has a way to shine, and we promote good mental and physical fitness and health of our employees and their families while also fostering a culture at the work sites where every employee can do their best. We encourage and support the well-being of our employees, and that is our motivation as we undertake our corporate activities toward the achievement of our ideal society with affluence both in matter and mind.

健康経営優良法人
Health and productivity

WEB **List of Panasonic Group's certified work sites (Japanese only)**
https://phio.panasonic.co.jp/health/excellentList/index.html

◇ WELL Certification[*1]

The Panasonic Group has received the following international certifications for our creation of well-being-oriented workplaces where all employees can do their best work.

- Jan 2021: Panasonic Life Solutions Company (Osaka, Japan) WELLv2 pilot, Gold
- 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
- January 2023: Panasonic Wellness Smart Town (WST) Showroom (Jiangsu, China) WELL Performance Rating

*1 An assessment system for office spaces that hope to foster a better cycle of creativity in addition to the perspectives of the impacts of the design, structure, and use of space on peoples' health, established in 2014 by the U.S.-based International WELL Building Institute Public Institute (IWBI), a public institute. There are four certification levels in WELLv2: platinum, gold, silver and bronze. WELL v2 Certifications provide platinum, gold, silver, and bronze ratings. There is also a WELL Health and Safety Rating, which can assess the safety and health in workplace. The WELL Performance Rating evaluates indoor environment quality, including light, sound, and air quality. They use no ratings other than WELL v2.

Safety

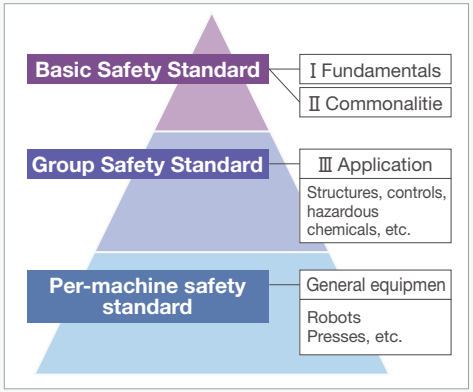
◇Guidelines for creating and applying Equipment Safety Standards

To prevent the risk of occupational accidents involving equipment, the Panasonic Group reviews safety conditions by evaluating compliance with our Equipment Safety Standards. These precautionary audits take place when Panasonic business sites develop and deploy or purchase production equipment or technologies, or quality evaluation equipment and apparatuses. Our Guidelines on Creating Equipment Safety Standards form the basic outline for the Equipment Safety Standards at each business site. They take into account the laws and regulations of Japan, international standards, our know-how, and real disaster case studies. We publish these Guidelines in multiple languages. We also ensure safe working conditions by performing compliance checks on potential hazards due to inappropriate behavior or insufficient ability in users, and by employing ergonomic considerations and measures in user environments.

System for creating and applying Equipment Safety Standards

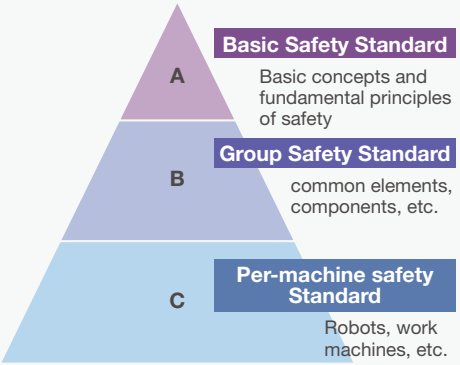
Diagram of the Equipment Safety Stamdards System at Panasonic

- 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



◇Preparing for Emergencies

We have established policies, systems, and other basics for emergency response in our Groupwide Emergency Response Procedures and related manuals to prepare for all types of emergency situations. We prepare for emergencies by making sure to respond carefully according to the response procedure through Groupwide regular disaster drills (including practicing evacuation and safety checks) for foreseeable incidents like fires or natural disasters and undertaking activities to spread awareness about preventing secondary disasters. For more details, see the Risk Management chapter (on page 130).

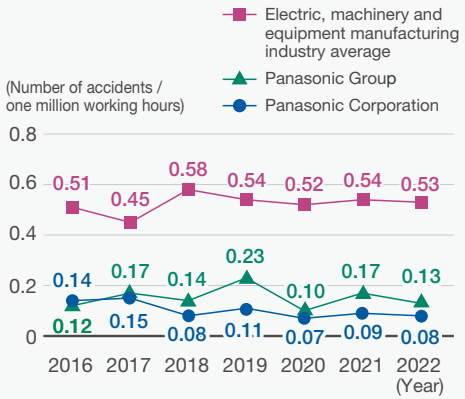
◇Response to workplace accidents

When a workplace accident occurs, the Panasonic Group follows our Guidelines for when a Workplace Accident Occurs and the general manager of health and safety for the work site where the workplace accident has occurred makes a prompt and accurate report to the general manager of health and safety for the Operating Company. We have established mechanisms to manage workplace accidents at each site globally, report serious workplace accidents that happen within 24 hours and monitor them for 365 days, and share cases studies and the like on workplace accidents with the entire Group. At work sites where a workplace accident has happened and in addition to investigating the cause and implementing measures to prevent it from happening again, we also undertake preventive Equipment Safety Education System initiatives at each Operating Company with reference to past accidents.

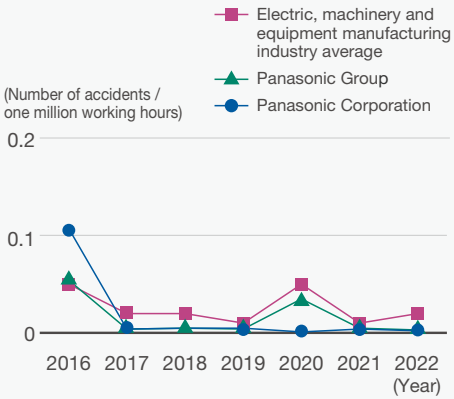
◇Serious Accidents in Recent Years and Prevention Measures

In 2022, there were three serious accidents that caused injury or property damage in Japan and five outside Japan. The Panasonic Group recognizes these accidents as a critical issue to be addressed. The primary cause of serious accidents is work being performed without stopping the equipment when performing non-standard operations such as adjustments or maintenance on production equipment, leading to fingers and hands being caught in moving parts of equipment. Such accidents account for approximately 80% of the total number of accidents, and we have found that production equipment installed before the introduction of equipment safety standards especially require safety measures. To prevent the same accidents from happening again, we make sure that employees are well-informed of the message from the Group's CEO and our guidelines for safe work during non-standard operation and disseminate information about the application of the Group's Equipment Safety Standards, and we are implementing our Equipment Safety Education System in order to train up individuals who can develop, practice and establish 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. We are considering expanding our activities to locations in each global region.

Lost-Time Injury Frequency Rate



Intensity Rate



Number of Serious Accidents (Global)

	2017	2018	2019	2020	2021	2022
Japan	0	1	3	5	4	3
Outside of Japan	4	3	7	4	6	5

Number of Fatal Accidents (Global)

	2017	2018	2019	2020	2021	2022
Target	0	0	0	0	0	0
Group employee	0	1	0	1	0	0
Temporary staff / onsite contractor employee	0	0	1	0	0	0

Equipment Safety Education System

	Learning about international standards		Learning about Group standards
Course title	Seminar on Equipment Safety for Engineers (Makers of equipment)	Seminar on Equipment Safety for Managers (Users of equipment)	Workshop on Equipment Safety Standards
Provide to	Production engineers who primarily design and improve equipment (including those responsible) • Production process engineering • Equipment maintenance • Health and safety, etc.	Those in production engineering, production, or safety who primarily manage the use of equipment • 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 • Production process engineering • Equipment maintenance • Health and safety • Production line leaders, etc.
Details	• e-Learning: 24 hours • In-person: 2 days	• e-Learning: 6 hours • In-person: 1 day	• e-Learning: 7 hours • In-person: 1 day
	• Technical theory, relevant laws • Overview of functional safety and safety systems design • Risk assessment and reduction in machine design and production stages, notification of danger • Practice: Equipment design risk assessment	• Technical theory, relevant laws • Overview of functional safety and safety systems design • Practice: Equipment design risk assessment	• Explaining the standards • Practice: Conduct a safety audit of actual equipment

Occupational Health

Regarding special tasks such as handling chemical substances, Panasonic conducts harmfulness reviews using Safety Data Sheets (SDS), provides appropriate protective equipment, and attempts to reduce the necessity of such work. Coinciding with the new obligation to conduct chemical substance risk assessments (as of June 2016), we review

substances subject to the assessment, conduct additional health checkups in compliance with all laws and regulations, and continually monitor the situation so that there are no negative effects on employees' health. The Ministry of Health, Labour and Welfare has also revised parts of its regulations aimed at preventing on-the-job accidents involving chemical substances, including regulations on occupational safety and health. These revisions are premised on the national government expanding infrastructure for communicating information about dangers and hazards posed by harmful chemicals as well as standards for upper limits on exposure it has set, including harmful chemical substances that have not as yet become subject to regulations, and requires businesses to take appropriate measures to prevent exposure (self-driven management). The Panasonic Group established our Chemical Substance Management Standards in April 2022, created a chemical substance management working group, and shares the necessary information across the Group on progress with new initiatives geared toward enabling smooth transition to a new framework created with consideration to the changes to these laws, and are sharing and promoting information about the self-driven management of chemical substances across the Group, including issues, measures, rules, and training that we should consider as a Group.

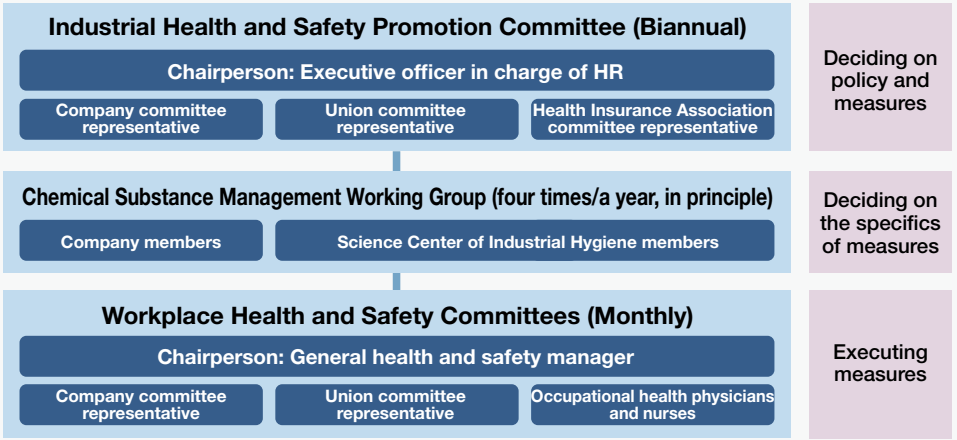
◇Chemical Substance Management Standards

The Group established these standards in April 2022 to facilitate a smooth transition Groupwide with regard to measures that are required based on changes to the Occupational Health and Safety Act, Fire Service Law, Poisonous and Deleterious Substances Control Law and other relevant laws. The goal of these standards is to enable us to appropriately and effectively work toward eliminating and reducing sources of danger or hazards to prevent work-related illness caused by chemical substances or the like in the workplace, as well as implement health management.

◇Promoting Organization

The Group CHRO is the executive responsible for promotion (as of August 2023). Decisions regarding Group policies and measures are made by the Industrial Health and Safety Promotion Committee, with the Chemical Substance Management Working Group set under the Committee to determine the specifics of measures, and measures are implemented by a Health and Safety Committee at each workplace.

Organizational Structure for the Promotion and Roles



Training

Panasonic Group educates employees, including dispatched workers, managers, and occupational health and safety personnel based on the Safety and Health Education Guideline and the Mental Health Education Guideline that it has established. The Group Health and Safety Management Division sponsors and conducts management-level and Groupwide training, while each Operating Company and workplace performs training based on its own needs. We also provide contractors with the necessary information and educational content to raise awareness. Each of our workplaces learns about good examples of good initiatives related to personal health and occupational health and safety promotion from one another with the Group's Employee Personal Health and Occupational Health and Safety Forum held in September each year where those responsible for Group health and safety come together to recognize workplaces that have achieved zero incidents, those that have undertaken exceptional initiatives, and so on. We work to make this Forum a chance for the Group's CEO to share his vision for activities related to personal health and occupational health and safety with all executives and other relevant individuals, to gain knowledge from outside experts, for workplaces to share success stories about initiatives related to personal health and occupational health and safety promotion activities from one another, and to set a high standard for our health and safety activities. We also make sure that everyone in the Group 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.

Groupwide Core Training and Numbers of Trainees (Fiscal 2023)

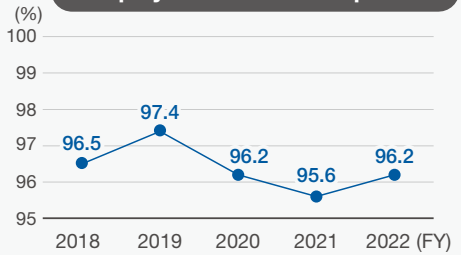
Organizer	Target employees	Course name	Number of trainees
Panasonic Operational Excellence Co., Ltd.	Persons in charge of Health and safety (within 3 years)	Occupational Health and Safety Manager Training (Beginner)	49
	Manager or above (at the time of new appointment, etc.)	Health and Safety Seminar for HR staff	18
HR Function Planning Office	2nd year of regular hiring/Job change/Career recruitment HR employee	HR Basic Course	61
Team &Talent Development Center	Mid-career hires/Spring new graduates	Introductory education for mid-career recruits, introductory education for spring new graduates	–
	Employees assigned to overseas manufacturing companies	Pre-departure training at an overseas manufacturing company	143
Manufacturing Training Institute	Factory managers, production managers, etc.	Top Management and plant superintendent	20
	Hygiene manager/Operation chief with More than 1 year of practical experience	ISO45001 internal auditor training	12
	Manufacturing, production process and quality employees	Equipment safety standard creation and operation workshop (C training)	31
total			334

Promoting Health Management

Employee Health

We have sent out a message on health to the entire Group, clarifying our policy of strengthening health investments to realize employee well-being. In Japan, each Operating Company promotes various initiatives through Healthy Panasonic, a unified effort from the Company, labor union, and health insurance association.

Employee health checkup rates



*From 92,000 eligible employees at 269 locations

We also review the results of periodic health checkups, EOSs, and stress checks to confirm that our efforts have succeeded and make further improvements and enhancements.

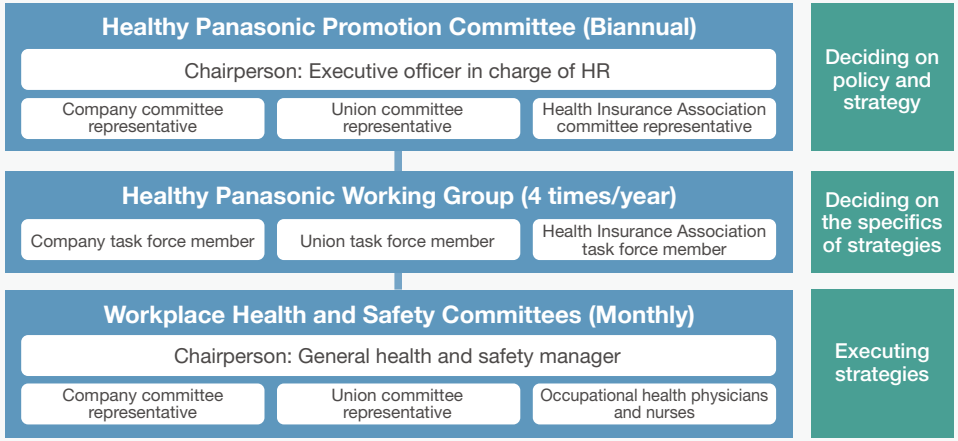
◇Health Maintenance Betterment Standards

In the interest of appropriately and effectively undertaking measures to maintain both employees' physical and mental health, in these Standards we have laid out procedures for health checks and follow-up measures, procedures for guidance on interviews with individuals working long hours, procedures for tests and the like to measure the level of psychological burdens, procedures for stopping those who are ill from working, and stipulates that Health Maintenance Betterment Plans and mental health promotion plans must be created. The Panasonic Group's Health Maintenance Betterment Measures and the Panasonic Health Insurance Union's healthcare business to create synergy between all their initiatives. When it comes to the specific promotion of initiatives, members are selected from the company, the labor union, and the health insurance union to promote them as Healthy Panasonic initiatives.

◇Promotional Framework (in Japan)

The executive in charge of promoting Healthy Panasonic is Executive Officer and Group CHRO (as of August 2023). We established the Healthy Panasonic Promotion Committee—comprising representatives from the Company, labor union, and health insurance association—as the decision-making body for Healthy Panasonic policies and measures. It decides on measures proposed by its subsidiary organization, the Healthy Panasonic Working Group, and implements them through the Health and Safety Committee of each workplace.

Organizational structure for the promotion of "Healthy Panasonic"



◇Health Issues and Initiatives (in Japan)

As Panasonic Group's employees become older, the number of individuals with obesity or other health problems is increasing. With more employees working from home due the COVID-19 pandemic, issues like a lack of exercise and communication are becoming more prevalent as well. We need to raise employees' health literacy and get more employees to adopt healthy practices.

There is a tendency for individuals who have more proper lifestyle habits in all five areas of lifestyle habits (sleep, diet, exercise, moderation with alcohol, and avoiding tobacco) to be less likely to be obese and have better job performance (based on self-evaluation). One of the goals of the Healthy Panasonic initiative is to increase the proportion of individuals who have four or more of these proper habits by fiscal 2024 to at least 50%. That proportion was 36.4% in fiscal 2023, a 5% increase in the past four years.

One example of an initiative meant to raise our employees' awareness about health is to have a Groupwide Health Improvement Day (October 3).

Every year, we set priority themes (diet and nutrition for fiscal 2024 and made efforts at all workplaces to raise awareness of healthy behavior and practices.

Panasonic offers ICT-based health promotion solutions through web services and lifestyle habit apps. These solutions provide health information, health checkup records, health challenges, health care point programs, and tools for measuring health age after periodic health checkups.

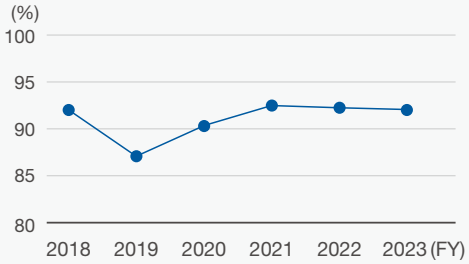
◇Environmental Improvements (in Japan)

We are promoting workplace improvements so employees can work healthily at 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 90.5% of the Group). In addition, we conduct an annual food conditions survey in 108 Group cafeterias nationwide and promote healthy eating environments in cooperation with approximately 40 contracted food service companies. Currently, 24 cafeterias have obtained outside certifications under the Healthy Eating and Dining certification system. Panasonic also considers employee safety as required by actively offering health guidance and occupational health counseling, mainly through the 160 health management offices across Japan. These efforts are for individuals subject to specific health guidance and at high risk of facing 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 at home and simple exercises that can be done at home, thereby helping employees be proactive in maintaining health.

◇Stress Check (in Japan)

All Panasonic group companies conduct Stress Checks in June of each year, in order to promote group analyses and workplace improvements on a company organizational unit level in addition to 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. In addition to providing employees with an opportunity to identify their own stress levels, the Stress Check Test results offer workplace feedback in the form of a diagnostic analysis. This analysis is used to develop measures intended to prevent the occurrence of mental illness and to revitalize the workplace. Employees who work long hours or whose regular health screening results suggest a need for monitoring their safety receive a consultation from an occupational physician based on Panasonic Group's own criteria. Measures are also taken to prevent damage to the employee's health, including by addressing working conditions and environment. Furthermore, from the perspective of employee health and statutory compliance, we are striving to address excessive working hours and fundamentally review work processes in a way that goes beyond short-term efforts. This is part of our approach to continuously improve how employees engage in work and downtime.

Stress Check Rates



(Data were gathered from workplaces subject to Panasonic Group Groupwide programs)

Efforts to Prevent Harassment and Ensure 100% Legal Compliance (in Japan)

The Group aims to respect the individuality and abilities of each employee in all workplaces so that everyone can feel motivated and comfortable in their work. Therefore, to encourage Panasonic members 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 "Zero Harassment Month" and have been raising awareness about harassment.
- We are revising our disciplinary rules (with stricter disciplinary measures for harassment) as a Groupwide effort to deter harassment.
- Since 2021, we have worked toward establishing a consultation service, training the service's managers and staff.
- We have provided harassment prevention training to all Group members since July 2023.

Work with a sense of fulfillment

～Encouraging employees' self-motivated endeavors and supporting their self-determined career formation～

Development of management executives

For the sustained development of our Group, a diverse pool of managers that can drive business forward is absolutely essential. To that end, we are working to create a pipeline of successors over the medium to long term. As specific Group-level initiatives, for the 26 key positions such as executive officers of Panasonic Holdings Corporation and presidents of operating companies, we are promoting the development of a diverse pool of management executives irrespective of nationality, work history, gender, age, or other attributes based on a policy of fast-tracking and "the right person for the right job." Also, the Group Talent Management Committee has been established to discuss and promote the search, development, placement, and monitoring of successors from the optimal perspective of the entire Group, and is currently working on the career development of the 100 successors the Committee selected based on short, medium, and long-term perspectives. We will continue to enhance this group of successors' quality, quantity, and diversity.

Successor readiness rate

4.4 successors/post

* The total short-, medium-, and long-term successors for 26 key posts, including Panasonic Holdings Corporation (PHD) executive officers and Operating Company presidents, divided by 26

Leadership development participation rate

71.3%(82/115)

* The percentage of the successors preparing for 26 posts who have taken internal leadership training.

Succession readiness

Appointment possible immediately	16.5%
Appointment possible within five years	31.1%
Appointment possible within ten years	52.4%

* The percentages of successors preparing for 26 posts ready for appointment immediately or within five or ten years

Moreover, each Operating Company has a similar Talent Management Committee to discuss and promote identifying, training, assigning, and monitoring successors to important posts such as business division heads from a multifaceted perspective, helping develop managers for optimal Groupwide management.

Training Executive Candidates

We have made available the best internal and external training programs for executive candidates, and we continue to hold programs such as Launching Executive Leaders and Creating Executive Leaders, which launched in fiscal 2021. A total of 31 people (over 13 days) have participated in the former program and 46 people (over 11 days) in the latter. In addition, since fiscal 2022, we have been enhancing our new director training programs and group management workshops.

◇Launching Executive Leaders (LEL)

This program is for business division head candidates. It is a self-improvement program that allows candidates to practice the skills required for future business management. The program fosters a mindset inclusive of diverse human resources and values through thorough self-reflection, including their weaknesses.

◇Creating Executive Leaders (CEL)

This program is for business unit head and affiliate company president candidates. It is a personal growth program that instills the mindset for future discontinuous career development and the vision and perspective of a managerial executive.

◇Management Literacy Training

This program is for all candidates. It is designed for those who have acquired the basics of management literacy (including management strategy, marketing, and accounting) and will be ready for CEL training within a few years.

Remuneration System

Panasonic Group has adopted a performance-linked remuneration system that sets current fiscal-year bonuses based on the Company's previous fiscal-year performance. Corporate performance reflects in remuneration more at higher levels of management. Moreover, individual bonuses are determined based on how individuals perform in their jobs the previous fiscal year. With corporate and individual performance impacting remuneration to some degree, Panasonic inspires the desire to improve both aspects of performance.

◇PHD Remuneration System for Directors (excluding Outside Directors) and Executive Officers

At PHD, the system consists of a fixed base salary, performance-linked remuneration (with short-term and medium-term performance-linked portions) as an incentive reflecting short- and medium-term performance, and restricted stock remuneration as a long-term incentive. The amount of performance-linked remuneration reflects evaluations of financial items (consolidated performance: EBITDA, ROE, operating cash flow) and nonfinancial items (set separately for each individual) emphasized in the current medium-term plan. Additionally, the restricted stock remuneration is in a form that allows for lifting transfer restrictions immediately after directors and executive officers resign or otherwise leave the Company and is designed to share value with shareholders more than ever through continued shareholding. The remuneration system for the presidents of major Operating Companies is similar to that for PHD's directors (excluding outside directors), as they are responsible for enhancing the Group's corporate value.

Evaluation item	Short-term incentive		Mid-long term incentive	
	Evaluation indexes and items	Weight*1	Evaluation indexes and items	Weight*1
Financial (Consolidated business results)	- EBITDA*2 - ROE*3 - Operating cash flow	50%	- ROE (Note 3) - Operating cash flow	50%
Non-financial *4	- Elimination of serious accidents, ensuring compliance - Environmental contributions - Human resources strategy - Operation KPI related to strengthening competitiveness	50%	- Environmental contributions - Efforts to improve the Group management level	50%
	Total	100%	Total	100%

*1 The weight for the Representative Director, President and Chief Executive Officer is 60% financial, 40% non-financial for the short-term incentive, and is 80% financial, 20% non-financial for the mid-long term incentive.
*2 This is the total of operating profit, depreciation (tangible and right-of-use assets), and amortization (intangibles).
*3 ROE: Return on Equity attributable to Panasonic Holdings Corporation stockholders
*4 This is set according to important initiative items determined according to the roles and official duties. (The following are examples of specific indexes.)
- Elimination of serious accidents, ensuring compliance: Numbers of serious accidents occurring, numbers of major compliance problems occurring
- Environmental contributions: CO_2 reduction in the Panasonic value chain
- Human resources strategy: Results from employee attitude surveys, rate of female hires (promotion of Diversity, Equity & Inclusion)
- Operation KPI related to strengthening competitiveness: Strengthening of procurement and logistics functions, DX for operating processes, improvement in numbers of patents
- Efforts to improve the Group management level: Complete communication and implementation of basic management policies, implementation of design thinking management, improvement of brand recognition

Developing human resources to promote PX and GX (in Japan)

We are driving Panasonic's digital transformation, or PX, and it is comprised of two aspects: customer service and business operations. This includes IT transformation, operating model transformation and culture transformation. We will support each and every employee, including top management, to improve their knowledge and skills so that they can use data technology and create value on their own business site. We will also focus on recruiting and developing professional personnel to promote PX. In addition, we are promoting human resource development that advances Green Transformation (GX), a strategy advocated and promoted by the national government.

Developing human resources to promote PX

Panasonic is working toward developing human resources for IT. In April 2022, the Information Systems Department defined human resource categories and outlined the specialized skills and knowledge required for each category. In April 2023, we established training systems for each human resource category to enable employees to acquire the knowledge necessary to enhance their skills in each category or advance their careers in other categories. This training system will help all employees improve their skills and contribute to realizing PX.

Developing human resources to promote GX

Our group has announced its long-term environmental vision, Panasonic GREEN IMPACT, to promote the development of human resources with expertise in carbon neutrality, the circular economy and other areas to help achieve global environmental sustainability.

Middle Management Training (in Japan)

Training for Newly Promoted Managers

We believe that managers (section managers) play a critical role and have a great deal of responsibility in driving Panasonic Group toward realizing its business strategies.

Newly Promoted Manager-Trainees

4,921

Specifically, managers today 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 active role. To this end, we offer a rank-specific training program for newly appointed managers.

This program consists of literacy components (including "Accounting and Finance" or "SCM Management") required for organizational management and a component for establishing one's own leadership style through deep reflection and dialogue with senior management through workplace practice. We improve the program every year in response to changes in the environment and the needs of the Operating Companies. We operate the program using a remote learning environment so participants can study even when working overseas, raising children, or caring for family members.

Training for All Employees

Global Human Resources 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 15-month human

resources training program. It includes workshops on basic management policies and diversity, launching and promoting actual business projects, mentoring and coaching, and various other activities. Participants work with partners from different European affiliates to improve their overall business knowledge and skills. In Japan, we hold the Senior Management Development Program (SMDP) for key senior managers (including directors, GMs, and managers) worldwide, with 27 participants from 11 countries attending the most recent program in March 2023.

Furthermore, we have a Groupwide Panasonic Global Mobility Policy that provides rules for inter-regional transfers and programs for inter-regional transfers and for overseas employees to work in Japan.

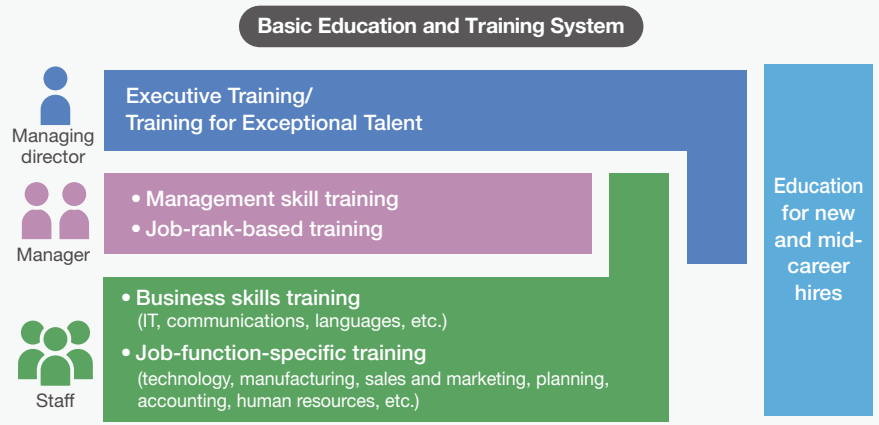
Hierarchical/skill training (in Japan)

Panasonic Group has established the Team & Talent Development Center (T2DC) as an organization that specializes in organizational development and human resources-related development and training for employees of the Group. The T2DC provides onboarding training to new graduates and mid-career hires so that new employees can quickly become active in the Group. It also offers business skills training that teaches IT, communications, languages, and other skills required to facilitate employee tasks. Job-function-specific training is provided as well so that employees can learn the specialized knowledge and skills needed to accomplish their tasks, whether they be technical, manufacturing, or sales and marketing. In addition, T2DC offers elective management development training for employees who meet certain conditions, management skill training meant to give managers greater management capabilities and the ability to practically implement Panasonic Group's Basic Business Philosophy, and other forms of job rank-based training. Starting in April 2020, to accelerate self-directed learning, we provide training modules on business skills and liberal arts in Japanese, English, and Chinese on our internal website, providing a learning platform that allows employees to easily learn every day, from anywhere in the world.

Training Performance

Number of individuals × Number of days	114,576	person-days
Number of employees taking Open Training	12,308	

* Includes all employees who attended training offered by T2DC or the Monozukuri Training Center
* Includes these programs: E-Learning, group training (online), group training (face-to-face), distance learning, hybrid training (Does not include training conducted outside the Group or by business divisions or job functions)



Open Training (in Japan)

The T2DC offers Open Training for all employees in Japan. We provide comprehensive training programs by function (job function), skill, and job level so employees can independently acquire and hone their desired skills. (Programs available: 1,920 (as of 2023)) Employees can apply via the company intranet, and a total of 12,308 employees took advantage of these programs in fiscal 2023.

Organizational Development: Building an Organization and Culture Through Dialogue (in Japan)

Panasonic Group defines organizational development as "activities that promote achievement and self-actualization by drawing out the inherent potential of people and organizations." The keys to fully drawing out potential are "self-directed individuals (employee entrepreneurship)" and "collaborative organizations (participative management through collective wisdom)." To realize this goal, we plan and propose customized training sessions and workshops tailored to the needs of business sites and workplaces and broadly deploy initiatives within the Group to promote understanding and embracing organizational development.

Career Development Support (in Japan)

We believe that the basis of "work with a sense of fulfillment" is to volunteer and take on challenges. Therefore, as a company, we support individuals' willingness to take on challenges and pursue self-directed career development. As a result, in fiscal 2023, approximately 2,000 employees volunteered for—and around 500 actually took part in—a new challenge, such as job transfers across Operating Companies within the Group (relocation) and in-company multitasking (concurrent postings within the Company).One other initiative is A Better Dialogue,

which supports every employee's personal growth and challenges by enhancing the quality and quantity of dialogue with their respective managers. It consists of one-on-one meetings, which bring out the aspirations of each and every employee, and three mechanisms: career and skill development, goal management, and competency reviews. The Group is committed to promoting these diverse opportunities for dialogue. In fiscal 2022, we achieved significant success, with implementation and satisfaction rates of 78% and 84% in Japan. Moreover, to enable all employees to maximize their individuality and abilities and enhance job satisfaction, we are creating opportunities to enhance the value of their individual experiences, take on challenges, and actively participate in various aspects of the Group, including pre- and post-employment onboarding, career development, evaluations, promotions, transfers, and secondments.

Internal Recruitment Figures (in Japan)

Internal recruitment applications	1,936
Internal recruitment transfers	466
Internal dual employment	38

1on1

Participation rate	78%
Satisfaction rate	84%

Building Total Rewards Systems That Treat Both Our Organization and Our Ambitious Employees the Way They Deserve (in Japan)

A "Role/Grade System" has been implemented at Group companies in Japan. This system determines work/role grades for employees according to the size of the work or role they currently perform and constitutes the basis for employee benefits. The aim of this system is to treat the wide variety of employees at Panasonic Group based on the scope of their work and responsibilities. This helps to enhance the transparency of our human resources system, and fosters understanding among employees. By setting clear goals for employees to strive for, we encourage them to be bold in achieving their goals. In addition, some Operating Companies are revising and restructuring their human resource systems according to the industries and markets they serve. Through these initiatives, we aim to build an organizational culture brimming with vitality that rewards both our people and organizations for taking on challenges.

Career and Life Design Seminars (in Japan)

To nurture individuals who continue to take on challenges and support self-directed and diverse career development both within and outside the Group, we have held Career and Life Design Seminars for all employees in the target ages (33, 38, 43, 48, and 53 years old) since fiscal 2015. The program has three pillars: career design, healthy living, and financial planning. It promotes understanding the importance of self-directed career development, encourages behavioral changes toward realizing a career vision in five years, and offers support for preparing a fulfilling life plan.

Wealth Formation and Security

Employee Stock Purchase Program (Panasonic Employee Shareholding Association) (in Japan)

The Group has established the Panasonic Group Employee Shareholding Association to promote employee shareholding through a monthly savings plan as an incentive. The objectives are to help employees build wealth and encourage them to commit to the Group's performance by acquiring Panasonic shares.

Mutual Aid, Insurance, and Savings Programs (in Japan)

To ensure that employees can work with peace of mind, Panasonic Group offers mutual aid and insurance programs for housing, death, illness, injury, and nursing care and savings plans to build future assets.

Work together by giving full play to all individuality

～Promoting DEI (Diversity, Equity & Inclusion)～

Top management commitment

The "top management commitment" means management members themselves are committed to promoting DEI and do so by incorporating it into business strategies.

Commitments from All Operating Company Presidents (in Japan)

All Operating Company Presidents are committed to promoting DEI as a business strategy to realize "help maximize the potential of each employee." As a part of this initiative, we established a new Group DEI Promotion Council in fiscal 2022. The Council allows management to share a common understanding of the DEI issues that must be addressed and engage in an ongoing dialogue on Groupwide initiatives. The Group CEO serves as chairperson, with all Operating Company Presidents and some employees as members. Its meetings determine and promote critical actions. Additionally, DEI reports are regularly presented at PHD Board of Directors meetings. At the Group Management Meetings held in May and August of last year, we heard reports on the Group DEI Promotion Council and held other discussions to accelerate and improve DEI initiatives.

Endorsement to Social Movements

◇Endorsement of EqualityActJapan

In 2021, Panasonic Holdings Corporation (PHD) expressed its support for EqualityActJapan,

a petition-based movement for the enactment of an LGBT Equality Act in Japan. Based on our management philosophy, in the Panasonic Group Code of Ethics & Compliance we clearly state that we respect basic human rights, and do not permit discriminatory speech or conduct with regard to sexual orientation or gender identity, as defined by the applicable laws in the respective countries. At the same time, we are actively working to create a comfortable work environment by recognizing same-sex domestic partners as equivalent to legal spouses within our HR systems, and providing internal training to promote understanding of LGBTQ issues.

#EqualityActJapan
日本にもLGBT平等法を

◇Endorsement of Tokyo Rainbow Pride

PHD supports Tokyo Rainbow Pride, a non-profit organization that aims to realize a society where LGBTQ persons can live positively without discrimination and prejudice. In addition to supporting activity plans through our pro bono program, since 2014, we have also sponsored the organization's annual event, continuing to participate in activities such as booth exhibits and parades.

TOKYO RAINBOW PRIDE

◇Endorsement of the recommendations of the American Chamber of Commerce in Japan (ACCJ)

In 2020, PHD endorsed the American Chamber of Commerce in Japan's (ACCJ) recommendations to the Japanese government on legal equality in marriage. By recognizing the right of LGBT couples to marry, the ACCJ seeks to remove obstacles faced by companies doing business in Japan in recruiting and retaining talent and treating their diverse workforces fairly. Our endorsement of the proposal is in line with our stance since 2016 of recognizing same-sex domestic partners as equivalent to legal spouses within our HR systems in Japan.

ACCJ

◇Endorsement of 30% Club Japan*

In 2021, PHD announced its support for 30% Club Japan, a global campaign to increase the percentage of females in key decision-making positions at companies, with the goal of increasing the percentage of female executives to 30% or more by 2030. To accelerate the participation of females in management, we are also working to further strengthen the management skills of our supervisors, in addition to holding study sessions for female employees and career development seminars for female leaders, and creating opportunities for them to experience the values and work perspectives of their role models.

30% Club
GROWTH THROUGH DIVERSITY

Awards

The Panasonic Group has been a pioneer in creating an environment in which diverse human resources can demonstrate their abilities. However, in an era of social change and increasingly diverse customer values, there is still much more to be done. We will accelerate our DEI initiatives as a group while learning from various precedents in society. The following are the awards we received so far.

WEB **Awards - Diversity, Equity & Inclusion - Sustainability**
https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/award.html

Creating an inclusive work environment (in Japan)

Creating an inclusive work environment is about building an environment where every individual's diversity is valued and fully utilized.

Group DEI Forum

The Group DEI Forum is an event held with the aim of providing an opportunity for each and every one of us to increase our understanding of and identification with DEI, and to take action. We held this forum every year since fiscal 2022 under the slogan, "Dialogue. Discovery. Appreciating Differences," and with the aim of awareness that DEI is something we must all take seriously because it concerns us all.

WEB **Report on the Second Meeting of the Group DEI Forum 2022**
https://holdings.panasonic/jp/corporate/sustainability/diversity-equity-inclusion/inclusive/dei-forum2022.html

Unconscious Bias Training

Unconscious bias refers to prejudices and stereotypes people have based on past experiences and perceptions that they are not consciously aware of having. We conduct training to learn about and become aware of the existence of these assumptions that everyone makes about others. Through changing one-sided views and perspectives and considering other possibilities, we review communication in the workplace to create a workplace culture where everyone can work comfortably and where every individual's diversity can be fully utilized. As of April 2023, approximately 110 employees have been trained as internal unconscious bias ambassadors, and training will be continually provided to approximately 60,000 employees in Japan from fiscal 2023 onward.

Support for every individual (in Japan)

Support for every person means helping each and every individual, with their diverse individualities, to face their challenges. We will work to build a support system and improve Human Resources systems and mechanisms.

Promoting diverse work styles

The Group aims to maximize results by accelerating innovation and strengthening competitiveness through improving productivity from an organizational perspective and realizing well-being from an individual one. From an organizational perspective, we improve productivity by optimizing the balance between office and remote work depending on business conditions and the fields in which employees work, rather than forcing just office or remote work. Meanwhile, expanding the options of time and place to work also leads to well-being from an individual perspective. Many employees within the Group are willing to continue to take on challenges despite their various circumstances. We will continue to expand the work time and place options to encourage these individuals to take on challenges and grow, allowing them to continue their careers with optimism.

WEB **Support for Every Individual: Diverse Work Styles and Work-Life Balance**
https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/support-worklifebalance.html

◇Greater options for work hours and places

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 short-day scheduling system for career development, we encourage individuals to take on the challenge of self-directed career development, including moonlighting 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. In addition, we have also made it possible for employees to take leave for personal reasons during working hours and to allocate their leave for this purpose. We are expanding these various systems, thereby supporting more diverse and flexible work styles.

Days and rate of paid leave

Work style-related data

Shorter working hours **962**
[Utilization rate among all employees: **1.5**%]

Flexible working hours **54,009**
[Utilization rate among all employees: **84**%]

Remote work system **11,882**
[Utilization rate among all employees: **19**%]

◇Support for employees during pregnancy and childcare

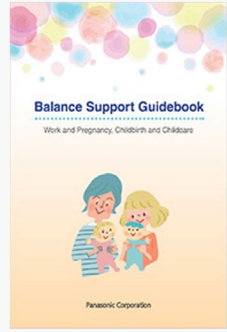
—Career support

We use the Guidebook for Supporting Work-Life Balance (Work and Pregnancy, Childbirth, and Childcare) to promote understanding of the company's systems. This guidebook also serves as a management guide for supervisors, promoting communication tailored to each employee's circumstances, from pregnancy through to the childcare period.

Childcare systems

Available for male employees / Available for female employees

Before pregnancy	Child planning leave	Family support leave
During pregnancy	Absence from work for medical checkups	Doctor-mandated maternity leave
	Extra break times and extended breaks for meals	Absence from work due to pregnancy
	Breaks during pregnancy	Work limitations during pregnancy
	Shorter working hours for expectant mothers	Conversion to light duty work
	Limitations on overtime, holidays, and late-night work	Limitations on hazardous and harmful work
	Limitations on the application of variable working hours	Work & life plan



—Panasonic Kids House

We established Panasonic Kids House, an internal childcare facility, in the Hoshida Company Housing (directly managed rental housing) in Katano City, Osaka Prefecture, with the aims of helping ensure a good balance between work and childcare for employees and contributing to the creation of a society in which it is easy to have and raise children.

Childcare leave utilization rate

Men: 64.8%

Women: 100%

The total number of employees who took childcare leave, etc. as well as the number of employees who took time off for the purpose of taking care of preschool children in fiscal 2023 divided by the number of employees who/whose spouse gave birth in fiscal 2023.

◇Support for employees caring for a family member

We use the Guidebook for Supporting Work-Life Balance (Work and Caregiving) to promote understanding of the company's systems. This guidebook also serves as a management guide for supervisors, promoting communication tailored to each employee's circumstances, from the stage before they start providing caregiving to after.

Since fiscal 2017, we have been holding seminars at each of our business locations and offices to raise awareness of the need for basic knowledge and preparation for balancing work and nursing care, as well as to promote understanding and foster a workplace culture among those in positions of responsibility through the seminars. We have also been holding online seminars for employees and managers since fiscal 2022.

We also have a website for Helping Strike a Balance between Work and Caregiving, which provides a summary of internal and external support systems and basic information available to employees at each stage of nursing care, from the stage before they start providing caregiving to after. In addition, we have established a nursing care consultation service in partnership with a company specializing in nursing care, and have a system in place where employees can consult with them at any time about their nursing care concerns.

◇Examples of Systems Supporting Work-Life Balance

As part of Panasonic Group's efforts to create an environment that enables everyone to play an active role, the company is implementing initiatives to support a good work-life balance for employees. The effort and adaptability of employees is vital for childcare, nursing care, and work to coexist. However, this effort may not be sufficient by itself, in which case, employees require the understanding and support of their supervisors and workplaces. The Group also creates guidebooks with hints for work-life balance, including explanations of the systems needed for maintaining personal and business responsibilities and information on how supervisors and subordinates can work together. This is another way in which Panasonic helps its employees continue their careers without worry, regardless of the situations they face with childcare or nursing care.

WEB **Diverse Work Styles and Work-Life Balance - Diversity, Equity & Inclusion**
https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/support-worklifebalance.html

Promoting gender equality

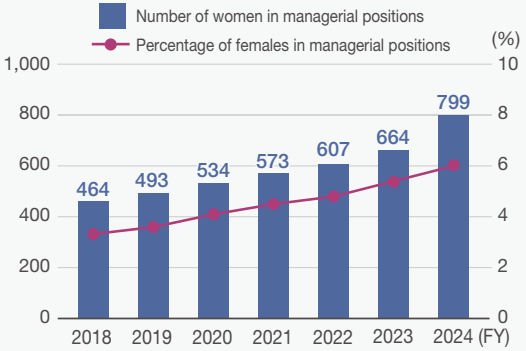
Management team diversity

Ratio of women and foreign nationals among PHD Directors (including Outside Directors) and Executive Officers 19%

There is no gender-based inequalities in the Panasonic Group's remuneration system. However, particularly in Japan, we are aware that there is a need to promote a greater number of women to senior management and decision-making positions, and the Panasonic Group is striving to ensure gender diversity. Therefore, in addition to creating an inclusive work environment, we are working on revising our evaluation and promotion processes from the perspective of equity. We are committed to undertaking activities such as holding study groups for female employees and career-advancement seminars for women leaders, and providing opportunities to encounter female role models' values and work ethics.

In addition, we are working to improve the work system and foster a flexible workplace culture where anyone who wishes can balance life events and career, and as one of the measures for that, we encourage male employees to take parental leave. These include the establishment of paid parental leave and childcare leave system with pay for a certain period of time. In addition, to ensure that employees can take a childcare leave smoothly and without anxiety, we are working to support employees by providing them video content about childcare supporting programs, as well as for their partner and supervisor, and holding information sessions regularly. As a way to help employees balance their life events and career after returning to work, we are also working to expand the choice of working hours and workplace, refining our remote work system policy in addition to no overtime and shorter working hours.

Females in managerial positions



Gender Pay Gap (Women:Men)

Managerial positions 93:100

All employees 73:100

calculated based on salaries and bonuses for fiscal 2023

◇Study session for female employees: Career Stretch Seminar

In the Japan, we offer training for female employees to improve their leadership and practical management skills with a view to becoming active in management positions. Many female employees participate in the training to improve their own skills, such as by experiencing the values and work perspectives of internal and external instructors, learning deeply about the company's strategic direction, and considering new challenges for themselves.

Creating a Workplace Where LGBTQ+ Individuals Can Take an Active Part

◇Code of Ethics & Compliance

The Panasonic Group Code of Ethics & Compliance, in accordance with the laws and regulations of all countries in which we operate, clearly forbids all discrimination or conduct that may result in discrimination based on characteristics like sexual orientation, gender identity, or gender expression.

◇Applying LGBTQ+ Allyship to HR Systems

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 cannot be applied due to legal restrictions.

◇Establishing Consultation Services

We have set up an internal contact point where employees can receive consultation services by e-mail or phone regarding any matter, including sexual and power harassment. (Anonymous consultation is available.)

◇In-House Training to Promote Understanding

To promote understanding about LGBTQ individuals and create more LGBTQ-friendly workplaces, Panasonic has been conducting training geared toward HR functions, managerial positions, and employees since February 2016. The training for HR functions offers not only basic knowledge about LGBTQ individuals but also methods for dealing with discriminatory speech or conduct and responding to the needs of those involved.

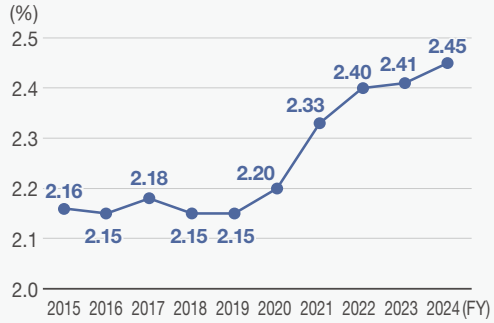
◇Sharing Information Internally

Information on advancing understanding of LGBTQ individuals and invitations to participate in events that support LGBTQ employees are also sent out via Panasonic's intranet.

Creating a Workplace Where People with Disabilities Can Take an Active Part

Individual workplaces are working on initiatives including the following in an effort to create workplaces where anyone can work in a way that works for them regardless of whether they have a disability or not. As of June 2023, the total proportion of Group employees in Japan who have disabilities was 2.45%, and we will continue in our efforts to promote independence and participation in the company on the part of people with disabilities.

Percentage of people with disabilities employed



- Whenever employees with hearing-related disabilities take part in workshops or classes, we make sure that they are able to access the same information through sign language interpretation and voice recognition software, among other methods. (E.g., we introduced a communication support and conversation visualization application UD Talk Groupwide in 2020. We prepared manuals and introductory training courses, and more than 100 workplaces have begun using the system.)
- We are also moving forward with improvements to workplace environments including flat floors without steps, using brighter lighting, and introducing a free desk system in which workstations are not strictly assigned.
- The Group also creates educational content in order to help provide a better understanding of life with a disability and offers opportunities for learning to all employees.
- We also have active communities of employees that have risen up to hold various information exchanges and discussions on themes surrounding disabilities.
- The Group established the Disability Work Support Hotline that makes it possible for those with disabilities or anyone else, including their supervisors, colleagues, HR, and the people responsible for DEI promotion to easily ask questions or seek advice. This makes it possible for the supervisors and coworkers of those with disabilities to find out how to accommodate individual disabilities. We promote workplaces that make it possible for anyone, including people with disabilities to work together without worry and be able to take on challenges.
- Through cooperation with regional and local governments, the Group has seven special affiliate companies and is actively working to hire individuals with severe disabilities. These special affiliate companies not only provide work environments that distribute components in a way that accommodates the body of a wheelchair user and adjusting workbenches, while also actively taking on interns and company tours.

◇Special Subsidiaries

We employ people with disabilities through special Group subsidiaries. Moreover, to promote understanding of people with disabilities and their employment, we offer work-study programs for junior and senior high school students, accept technical interns with disabilities, and conduct workplace tours.

Special Subsidiaries (as of June 1st, 2023)

Company Name	Year of Establishment	Number of Employees	(Number of Persons with Disabilities)	Description of Business
Panasonic Kibi, Co., Ltd.	1980	75	35	Assembly of AV units and parts
Panasonic Katano Co., Ltd.	1981	37	32	Assembly of avionics products and inspection and packaging of AV accessories
Panasonic Associates Shiga Co., Ltd.	1994	66	35	Assembly of electronic circuits (for massage chairs, shavers, etc.)
Panasonic Associates Tottori Co., Ltd.	1992	57	24	Manufacture of LED products and light sensors
Harima Sanyo Industry Co., Ltd.	1982	38	20	Assembly of vacuum cleaner parts and maintenance of the internal environment
Panasonic Heart Farm Associates Co., Ltd.	1998	73	43	Growing and selling of orchids, sale and rental of decorative plants, distribution of internal mail, cleaning and beautification of company premises
Panasonic Ecology Systems Kyoei Co., Ltd.	1980	47	31	Assembly of ventilating fan parts and printing of user manuals

Creating a Workplace Where Workers Post Retirement Can Take an Active Part

In 1982, Panasonic Group created the Senior Partner System, allowing workers past retirement age to enter into employment contracts under new conditions. In 2001 we introduced our “Next Stage Program” and we have continued to update these efforts all based on the fundamental approach of fostering independence, renewing our position as an industry leader in formulating policies for the employment of older workers. Most recently, we once again revamped the program and launched a new initiative for mid- to long-term personal development that includes skills and mind-set enhancement for currently active workers, based on the assumption that more people will continue to work into their later years.

◇Promoting Self-Directed Career Development

We are developing and promoting training seminars Groupwide on career and life design for various stages of people’s lives to help individual employees direct their own career development as early as possible.

◇Securing Employment Opportunities for Older Employees

Panasonic’s Next Stage Partner Program allows employees who wish to continue working after mandatory retirement at age 60 to do so until age 65. We have been striving to improve the working conditions under this system to encourage employees to leverage the expertise, experience, and skills they have cultivated over the years. The social significance of responding to the growing number of older workers who wish to work and the need to aid employees financially until they begin receiving pension benefits also drive our efforts with this program. In April 2021, we introduced a framework allowing employees to work beyond age 65.

◇Post-Resignation/Retirement Support

We are also offering economic support for employees who wish to leave the Group before retirement and seek new opportunities elsewhere, as well as support for those who wish to work elsewhere after reaching retirement age.

Employee Voluntary Community Efforts

Within the Group, mid-career hires, women, LGBTQ individuals, people with disabilities, and others have spontaneously established internal communities and are engaged in various activities, including conversations and online events.

◇Career Crossover

Career Crossover is an in-house community where people from different departments and work areas can become “virtual co-workers” and consult with each other.

In recent years, an extremely large number of mid-career professionals have been joining the Panasonic Group. Mid-career professionals face the challenge of having fewer peers to consult with than graduates fresh out of university. On the other hand, they have unique knowledge that they have gained through their experience in different companies and industries. Career Crossover was created as a platform to virtually connect such mid-career professionals so that they can ask each other questions and solve the problems they face on a daily basis.

Today, it has grown into a community in which not only mid-career professionals but also many other employees and even management participate. It also functions as a place where people can obtain opportunities for equity of access to information that is not dependent on their position or the department they belong to.

◇PWN (Panasonic Women’s Network)

Panasonic Women’s Network (PWN) is an internal community centering on female employees who wish to contribute to the company by utilizing their own strengths.

PWN aims to eliminate the gender unfairness that hinders positive feelings and actions, and is working to create opportunities for networking through events and other platforms. We aim to inspire each other through the connections that we create, and to gather the voices and thoughts of each person to help transform the company.

◇PRN (Panasonic Rainbow Network)

Panasonic Rainbow Network (PRN) is an internal community for LGBTQ persons and allies.

In recent years, the word LGBTQ has become increasingly familiar to people in Japan. On the other hand, there are still many people who think that there are no LGBTQ persons around

them or that they don't know what they can do to help make a difference. PRN is working to inform as many employees as possible that there may be LGBTQ persons on the same team as them. We believe that the more allies we have, the more people can express their individuality, resulting in greater psychological well-being in the workplace.

Panasonic Rainbow Network (LGBTQ&ALLY)

◇Diversity & Network (D&N)

Diversity & Network (D&N) is an internal community that aims to create an organization where employees with disabilities can work with vigor and demonstrate their abilities. D&N aims to achieve the following three goals with the vision of delivering better products and experiences to the world.

- Create a network of employees with disabilities and provide a place where they can encourage each other and speak up for themselves.
- Foster a comfortable working environment by bringing together not only employees with disabilities, but also colleagues committed to creating an organization that leverages diversity, and by showing understanding and taking steps to accommodate each other.
- Contribute to the Panasonic Group's manufacturing by making the most of experiences employees gain on account of their disabilities. Create a framework that generates added value by harnessing diversity.

◇Panasonic Deaf Association / Silent Lab

Panasonic Deaf Association and Silent Lab are internal communities where people who are and are not Deaf or hard of hearing to work together to create a comfortable working environment. We aim to achieve the following four goals.

- Provide a place for Deaf or hard of hearing employees who feel alone in their workplaces.
- Provide a place for employees to talk and learn in sign language.
- Provide a place where employees can post about their problems in the workplace, and share ideas and help each other.
- Contribute to the development of better services and products through interviews and questionnaires to Deaf or hard of hearing employees.

WEB Various Community Activities Various Community Activities- Creating an Inclusive Work Environment - Diversity, Equity & Inclusion - Sustainability
https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/inclusive/community.html

Initiatives outside Japan

◇North America

PNA views DEI as one of its most pressing business challenges and has developed a strategic DEI framework to promote recruitment, retention, and internal promotion of a diverse workforce. Specifically, we continue to support Business Impact Groups (BIGs), including RISE (formerly Women's Connect), Veterans Group, PRISM (LGBTQ support), Level Up (Millennials), and the BLAAC Employee Network (BEN) for Black, Latino, African American, African and Caribbean employees. We also further enhance our unconscious bias training to deepen our understanding of DEI. In addition, PNA's human resource leaders are working to operationalize a talent assessment process that includes how well performance on diversity and inclusion is evaluated. We have also introduced an employee awareness survey on DEI to gather opinions and basic data.

WEB Women Leading the Charge toward Equity at Panasonic North America
https://news.panasonic.com/global/stories/14082

◇Europe

Panasonic Europe has been promoting various initiatives in Europe to unleash more of our talent by providing a truly inclusive environment – where all people can develop to the maximum of their potential, irrespective of gender or other personal characteristics. As part of this, we launched a new human resources development program in 2019 called Women in Leadership (WIL). The goal was to provide a platform for our female talent to be more visible, a locus for the discussion of women-specific leadership challenges and a healthy brainstorming environment. 73% of employees who completed the program have obtained more important roles or have been identified for roles in which they have the potential to thrive.

In 2021 a new group, Women Connect Europe, consisting of diverse volunteers, was organized to enhance gender equality and attract many talented human resources of all genders. The Women Connect network now has 268 members in 30 countries across 31 Panasonic Europe brands. It's great to see in this year's EOS that the historic gender discrepancy in engagement has reduced as these initiatives take hold.

Additionally, we are conducting a new education program called the Unhelpful Bias Workshop. Part 1 focuses on all levels of employee to raise awareness and develop attitudes, values, strategies and skills that encourage a diverse and inclusive culture for all employees from all levels. Part 2 focuses on the Senior Managers to help them develop a meaningful strategy for their business. By taking

this approach, training can help to shape the inclusive culture that our people desire. We have also created a pan-European human resources team, to support DEI across Europe, called DIAG.

Female Leaders at Panasonic on the Role Models That Inspire Them
https://news.panasonic.com/global/stories/14117

◇ **Brazil**

At PANABRAS, we believe that by respecting individual differences and fostering positive relationships, we can create a more tolerant, respectful and sustainable work environment and world. Based on this belief, we have launched a DE&I (Diversity, Equity & Inclusion) project aimed at creating a more equal and inclusive work environment. Under this project, we are working to disseminate correct knowledge about the basic concept of unconscious bias and its influence through our leadership development programs. In addition, we are holding ongoing workshops and training sessions for employees in the human resources and other departments to enhance their sense of belonging.

We are also working to improve accessibility and workplace environments to create a more comfortable workplace for employees with disabilities. Examples of steps we have taken include making improvements to buildings, creating accessibility maps, ensuring inclusive recruitment and selection, and promoting education and training.

We continue to raise awareness and listen to our team members in all of our business units to get a bigger picture of the current situation surrounding diversity, based on which we set key metrics and challenges. We will work hand-in-hand with the organization's leaders, customers, suppliers, employees and their families to ensure that everyone places greater value on diversity in their daily lives.

HR Strategies in Investment Areas

In-vehicle battery (Panasonic Energy Co., Ltd.)

Under the principle of promoting ESG management, Panasonic Energy Co., Ltd. positions human resources as essential capital for its business development toward realizing its mission “to create a society where the pursuit of happiness and a sustainable environment coexist in perfect harmony” and its vision “to be the energy that changes the future.” It is developing human resource strategies and human capital management to strengthen its competitiveness and improve the well-being of its employees. Especially relevant in the rapidly expanding automotive business, Panasonic Energy urgently needs to bolster its ability and competitiveness in acquiring human resources to establish production operations in North America. In addition to the conventional career recruitment through agents, the newly established Kansas office is working to advance its global human resource development by establishing a pipeline with local educational institutions and building a training program in collaboration with the Nevada office and locations in Japan (including Suminoe and Wakayama). In Japan, it continues to improve its ability to acquire human resources, including better recruitment branding, and acquire approximately 500 new employees yearly. Moreover, it will continue to hold its Forest Meetings to share its mission, vision, and drive; develop One ENERGY activities to foster an inclusive organizational climate; promote reforms to job-based human resource management; and further innovate flexible work styles so that diverse human resources can interact and maximally leverage everyone’s individuality and abilities.

Heating and Ventilation Air Conditioning (Heating and Ventilation A/C Company, Panasonic Corporation)

Heating and Ventilation A/C (HVAC) Company, a Panasonic Corporation, is working on organizational and human resource development to realize its vision of becoming “a global, top-class professional company that creates a healthy, comfortable life and society through air and water technologies.” Specifically, in Europe, where it expects demand to grow, HVAC Company has established a system of local production for local consumption in which production, manufacturing, and sales are completed within the region. Alongside this initiative, it is expanding the plant production system and securing the required human resources needed in Czechia. Additionally, in April 2023, it merged with the air quality and air conditioning businesses, which had been operated as separate organizations within the Group. Going forward, it intends to create new added value using air and water by combining the air quality and air conditioning technological capabilities accumulated over the past 100 years. Furthermore, to improve its solutions to customers in the B2B business, it is working to secure and train engineering solution personnel, including engineering and software engineers with the necessary qualifications.

Supply Chain Management Software (Panasonic Connect Co., Ltd.)

Panasonic Connect Co., Ltd. will invest in human resources to increase corporate value through employee growth. Its ideal for employees is CONNECTers’ Success, through which it promotes initiatives to realize personal growth and a culture of empowerment so that all employees can thrive. Blue Yonder Inc.—responsible for the supply chain software business—is working to enhance the employee experience to achieve its medium- to long-term strategy, the “Seven Value Creation Plan.” Specifically, it will continue to acquire and develop human resources in critical positions, including AI, machine learning (ML), and architecture. It also works to improve engagement by enhancing onboarding, digitalization, business process simplification, and other productivity-enhancing measures.

In Japan, it is reviewing the system under which employees were previously hired on fixed-term employment contracts and introducing a system that allows them to be hired as full-time employees with market-competitive remuneration, aiming to bolster R&D by acquiring highly skilled human resources in Japan and overseas in areas such as AI, cloud computing, and data analysis.

Contacts for Whistleblowing and Seeking Consultation

Mental and Physical Stress Prevention and Response for Employees (in Japan)

Panasonic Group has established the following support lines to help employees prevent or deal with mental or physical stress.

◇ Employee Consultants

Since 1957, the Group has designated employees with abundant work experience as “consultants” and has implemented a Consultant System whereby other employees may consult with them. The consultants answer employees’ questions concerning welfare systems and help them solve work or private problems.

◇ Employee Assistance Program (EAP) Counseling Office

For this program, we have engaged specialist counselors to listen to employees’ personal concerns, and they can rest assured that what they have discussed will not be disclosed to the Group or their health insurance associations.

◇ Health Management Office

Panasonic Group staffs these offices with full-time occupational physicians and occupational health staff to provide a health support program that performs functions such as handling illnesses that manifest during work, consulting on mental and physical health, preventing lifestyle-related diseases, and helping individuals stop smoking.

Whistleblowing Discrimination and Harassment

The Group has set up a hotline where employees can anonymously report discrimination or harassment if they see or hear about it.

◇ Global hotline

For more details, please see “Business Ethics” chapter on page 138.

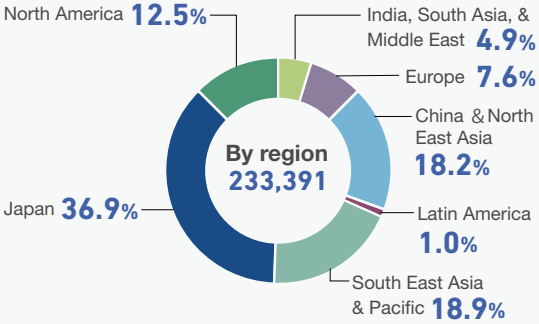
◇ Equal Partnership Consultation Office (in Japan)

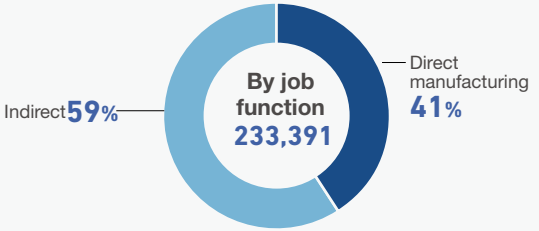
We have established an Equal Partnership Consultation Office with dedicated contacts in both the PHD and employees’ labor union. This whistleblowing framework allows us to address any concerns from employees, including temporary staff, who report cases of harassment, including sexual harassment (includes LGBTQ-related harassment), harassment based on power differentials, or harassment related to pregnancy, childbirth, or childcare leaves. During consultations, we safeguard employee privacy and carefully handle their concerns while confirming their needs. We also ensure that the employee and any other parties involved in fact-checking the case are protected from retaliation.

Human Resources Data

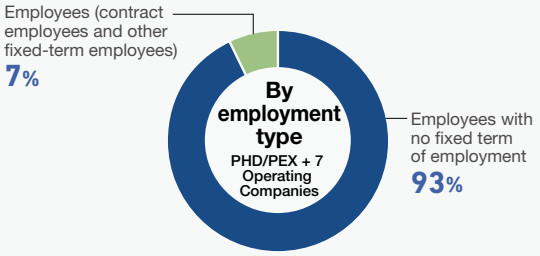
Number of employees

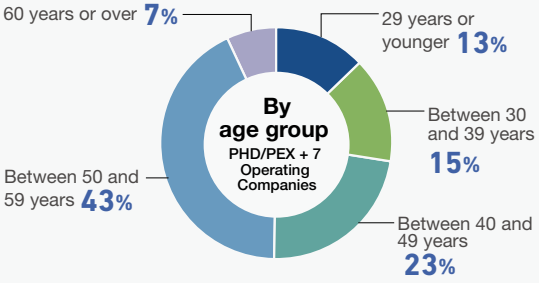
2023.3





2023.4





Recruitment figures
(full-time regular employees at nine companies in Japan)

Men	1,908
Women	533
Foreign nationals	100
Persons with disabilities	57
Mid-career hires	1,479

Average years of continuous service
PHD/PEX + 7 Operating Companies

Unit: year — April, 2023

	Men	Women	Average
Full-time regular employees	21.8	20.3	21.5
Part-time/fixed-term employees	1.5	1.9	1.6
Average	20.2	19.5	20.0

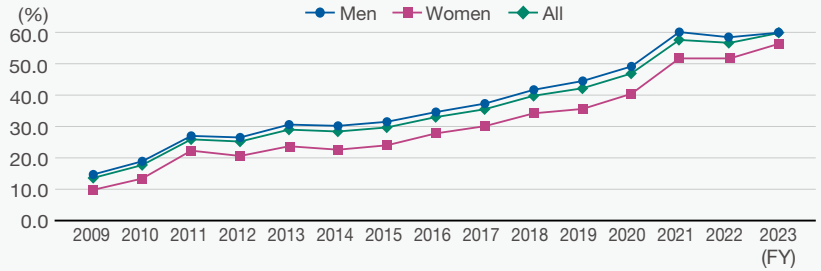
Turnover rate
(full-time regular employees at nine companies in Japan)

Turnover rate (for all resignation reasons)	3.6%
Turnover rate (for resignation reasons other than mandatory retirement)	2.2%

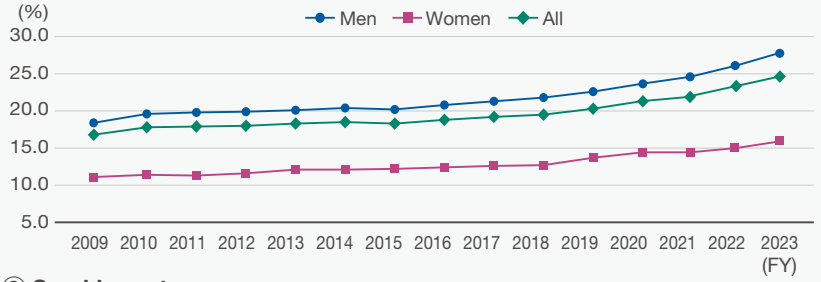
Turnover rate = The number of those leaving the Group per year divided by the annual average number of employees

Health Key Performance Indicators (in Japan)

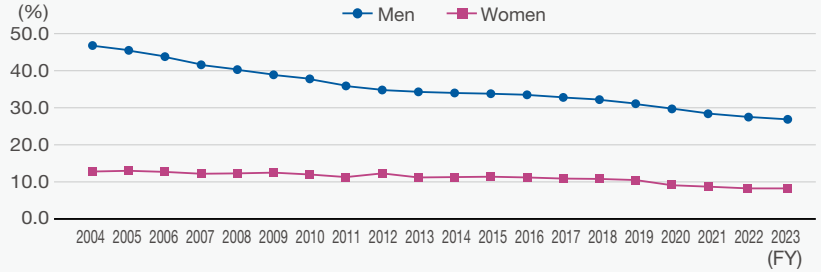
① **Rate of awareness of steps walked**
(% of those who know their approx. number of steps walked per week)



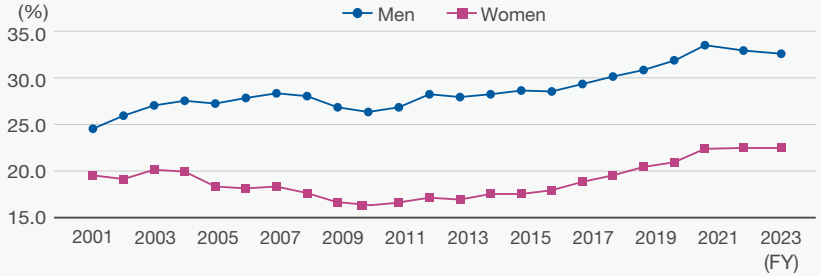
② **Exercise rate** (% of people who exercise at least 30 minutes twice a week for a year)



③ **Smoking rate** (% of people who smoke cigarettes)



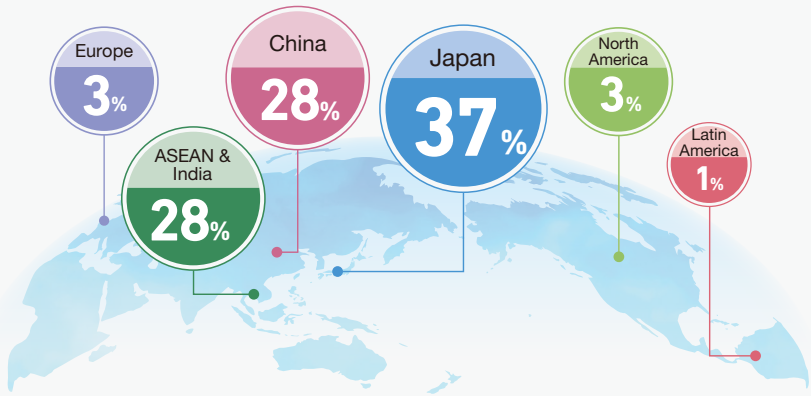
④ **Obesity rate** (% with a BMI of 25 or more)



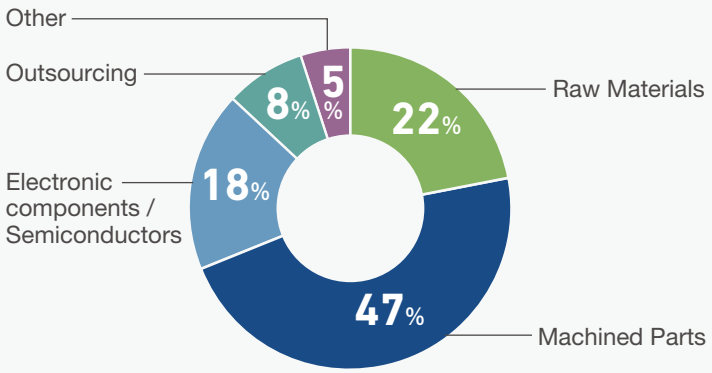
Responsible Supply Chain

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, worker-friendly labor conditions, and fair trade practices. 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 an d countries with many migrant workers.

Breakdown of Transactions by Region (%)



Breakdown of Transactions by Product (%)



Policy

Procurement Policy

Panasonic Group has summarized its core thinking on procurement in a 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, international standards, social norms, and corporate ethics, the Company promotes procurement activities, together with suppliers, that fulfill their social responsibilities, such as human rights, labor, safety and health, 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. This rule stipulates the basic policy regarding supply chain compliance and internal rules for its implementation. In addition to a thorough implementation of procurement operations, management reviews are conducted on a regular basis. Furthermore, in light of society’s and stakeholders’ increasing expectations, and of trends in legislation, we will revise, as necessary, to continuously improve our 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 Anti-Bribery / 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.

WEB Clean Procurement Declaration
https://holdings.panasonic/global/corporate/about/procurement/declaration.html

Responsible Executive and Framework

The Panasonic Holdings Corporation (PHD) Procurement Officer is the chief procurement officer for the Group (as of August 2023). Panasonic Group launched its Supply Chain Compliance Project to promote responsible procurement across the entire Group and establish a Groupwide framework to foster cooperation among all 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 and devise appropriate solutions to address any related issues through regular Groupwide meetings.

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 Panasonic Supply Chain CSR Promotion Guidelines (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 mineral 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 home page 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.

WEB For Suppliers
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 we make it mandatory, at the start of transactions for materials and components for the manufacturing of Panasonic products, 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. The template of our Master Global Purchasing Agreement obliges suppliers to comply with the CSR Guidelines. In addition, to obtain commitments from all our suppliers, we have been asking our suppliers to submit written consent to comply with the CSR Guidelines since revising them last December.

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 one before we start transactions with them. We also require our existing suppliers to conduct them regularly. We collect these assessments using a web-based questionnaire, reducing the burden on suppliers and our Group and improving collection efficiency and accuracy. We restarted the assessments and their collection at the end of 2021. By March 2023, we had collected the questionnaires from more than 12,000 suppliers (94%). After discovering 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 whenever necessary and work to correct them.

Since fiscal 2023, 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. From this fiscal year, using the risk-based approach mentioned above, each Operating Company focuses on those prioritized suppliers to be audited and carries out supplier audits by itself or with the third-party institutions according to its own supplier audit implementation plan.

Initiatives for a Harmonious Relationship with the Environment

We strive to reduce the burden we place on the environment through cooperation with our suppliers and logistics partners. Please see the Environment section.

WEB Environment: Collaboration across the Supply Chain
https://holdings.panasonic/global/corporate/sustainability/environment/supply-chain.html

Responsible Minerals Procurement

Our Basic Stance

Panasonic Group recognizes that the procurement of certain minerals (notably tin, tantalum, tungsten, gold and cobalt) carries a risk of funding organizations in states in conflict affected areas and risks that are involved in human rights abuses such as child labor, 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 Responsible Minerals Initiative (RMI) and its Cobalt Workgroup to promote industrywide efforts.

Responsible Minerals Procurement System

With the PHD Executive Officer in charge of procurement assuming ultimate responsibility, we are working to build a Groupwide management system for responsible minerals procurement in collaboration with each Operating Company.

Due Diligence Efforts

Responsible mineral survey requires cooperation from all our suppliers going back to the refineries and smelters. The Group conducts this survey using industry standard survey forms including the Conflict Minerals Reporting Template (CMRT) issued by RMI as survey tools.

Conflict Minerals Surveys

The Panasonic Group conducts surveys regarding conflict minerals on the suppliers of each Operating Company and business site. In fiscal 2023, we received responses for roughly 90% of the surveys we sent out to around 2,400 suppliers (as of March 31, 2023). 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 2023, roughly 80% 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 20% 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.

Cobalt Surveys

There are concerns about cobalt, which is used in lithium-ion batteries and other products, due to human rights issues such as child labor at mining sites. As part of its efforts to promote responsible minerals procurement, even with cobalt, Panasonic Group pursues initiatives in line with the OECD’s “Due Diligence Guidance” to build management processes that meet global standards. Specifically, we continually conduct initiatives such as cobalt supply chain surveys and identification and investigation of refineries and smelters.

In fiscal 2023, we conducted cobalt and mica surveys for about 2,000 suppliers. We received responses from 85% of those surveyed. The results showed that roughly 80 percent of the designated refiner and smelters had been approved as a Conformant/Active Smelter (as of end of March 2023). We also asked our suppliers to conduct further surveys in response to risks identified through risk analysis and assessment based on the survey forms collected from our suppliers.

Industry Collaboration Initiatives

Panasonic Group is participating in JEITA’s Responsible Minerals Procurement Working Group to raise supply chain awareness and improve the efficiency of surveys through industry collaboration. More specifically, we have been working with industry groups both inside and outside Japan and holding seminars and surveys briefing sessions to promote best practices regarding responsible minerals. We have also worked on smelters/refiners information scrutiny. We have been working in JEITA’s Working Group and continue to encourage smelters to participate in the Responsible Mineral Assurance Process (RMAP) with other member companies. Furthermore, we joined the Responsible Minerals Initiative (RMI) in July 2017, with the aim of learning about the latest industry trends and promoting best practices for procurement activities. Panasonic Group will continue to conduct responsible minerals surveys while monitoring industry trends.

Internal Training and External Awareness-Raising

Our procurement departments at Panasonic Group conduct CSR procurement training for our procurement staff members, who will be able to fulfill our social responsibilities when it comes to procurement activities, by teaching them about the company’s approach to CSR, and they create opportunities to gain knowledge about procurement compliance. We also provide training to our procurement personnel outside of Japan (the U.S., China, Asia and part of Europe) and through that training we give them a foundation of basic knowledge about CSR, including compliance related to the environment or preventing corruption, issues related to human rights, labor and health and safety in our supply chain, and clean procurement, as well as the importance of compliance, checking their understanding along the way. In addition to all this, we also build in basics on CSR procurement in our training curricula for new employees and those transferring from other divisions.

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.

To raise awareness in the supply chain, in fiscal 2022, we audited more than 130 suppliers in Malaysia, a region with high human rights risk. We used the opportunity to provide training on the importance of CSR initiatives and respecting human rights. In fiscal 2023, we continued to hold workshops and supplier meetings with about 100 suppliers, mainly in Malaysia. We also conducted CSR audits at around 50 suppliers in Asia. We plan to further expand the scope of our supplier education by prioritizing those regions and suppliers with high risk and looking to more regions.

Systems for Whistleblowing and Seeking Consultation

The Panasonic Group has established a Global Hotline 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 the like 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. In addition to our Global Hotline, we offer access to JaCER, a new 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."

WEB For Suppliers
https://holdings.panasonic/global/corporate/about/procurement/for-suppliers.html

WEB Global Hotline
https://secure.ethicspoint.eu/domain/media/en/gui/104773/index.html

WEB 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 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.

WEB **Panasonic Group Code of Ethics & Compliance**
https://holdings.panasonic/global/corporate/about/code-of-conduct

WEB **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 in each division. 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

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 all levels, they conduct regular quality assessments, monitor quality, and review the progress of these initiatives 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.

These Guidelines stipulate that Operating Companies and business sites must conduct quality monitoring based on the Guidelines. When this internal monitoring is conducted, we check for quality compliance in addition to the checks for each process on the quality assessment checksheet used by Operating Companies. Further, by evaluating what each has achieved through fact-based confirmation from the workplace and other evidence, we work to maintain a qualitative understanding of the effectiveness of the quality management systems at each Operating Company and business site.

Additionally, we obtained and maintain ISO 9001 certification 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.

An example site with ISO certifications by business unit
https://industrial.panasonic.com/ww/iso_ts_certification

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. We also offer e-Learning courses on subjects like the basics of product safety to spread a corporate culture of prioritizing product safety to all Group 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 2023, for a total of 81 times.

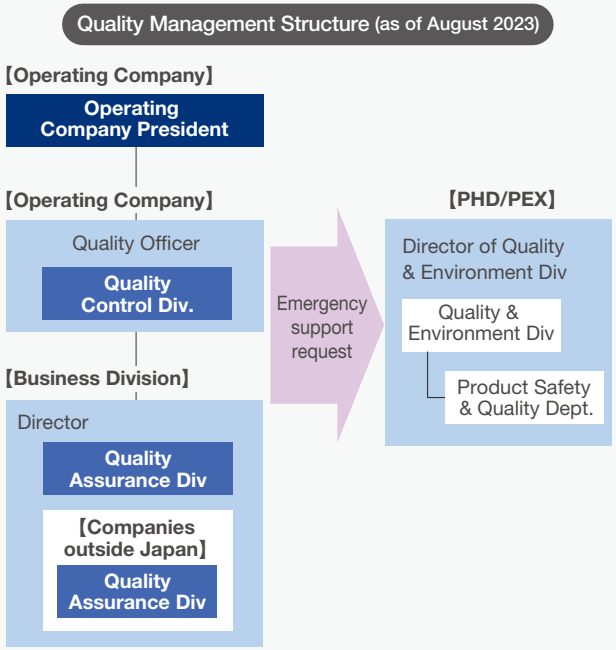

Product Safety Learning Square

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 the internal recall announcements and 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). Furthermore, we also launched the Virtual Product Safety Lab in 2022, making exhibits available online for free viewing. 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.

Responsible Executive and Framework

As of August 2023, 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.



Committees and Organizations

Activities of Quality Managers Meetings

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.

Global Safety Standard Certifications Obtained

ISO13482

The international standard relating to the safety of personal care robots issued by the International Organization for Standardization (ISO). Three types of robots are covered: physical assistant robots, mobile servant robots, and person carrier robots. Panasonic AGE-FREE Co., Ltd. has received this ISO certification for two of our products.

- 2014: Personal care robot Resyone (robotic device for nursing care combining the functionality of a bed and a wheelchair, the first device in the world to receive this ISO certification)
- 2017: Personal care robot Resyone PLUS (Japanese only)

WEB https://sumai.panasonic.jp/agefree/products/resyoneplus/

ISO 26262

An international standard for road vehicle functional safety that was published in 2011. The standard sets out four Automotive Safety Integrity Levels (ASILs): ASIL A through ASIL D.

- Panasonic Automotive Systems Co., Ltd. acquired certification in the ISO 26262 road vehicle functional safety standard from the German third-party organization TÜV SUD. The body recognized that Panasonic is able to comply with the highest level of safety in the standard (ASIL-D) during the process of developing onboard devices and device software.

PDF **Functional and Component Safety in Automobiles (Japanese only)**
https://www.jeita.or.jp/japanese/exhibit/2015/1111/pdf/02_Functional.pdf

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 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.

Product Security

Various products implement software and provide the ability to connect to networks for convenient usage. This makes it necessary to ensure the security of our products to prevent leaks or alteration of information and to prevent damages that may result from a malicious third-party attempting to cause products to malfunction. At Panasonic Group, we have a specialized department for Groupwide product security that develops guidelines to promote security-conscious design. We ensure the security of our products by streamlining our internal structure and rules, regularly reviewing these in conjunction with our information security and production system security initiatives, so our customers can safely use 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 that 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 (that include 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 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.

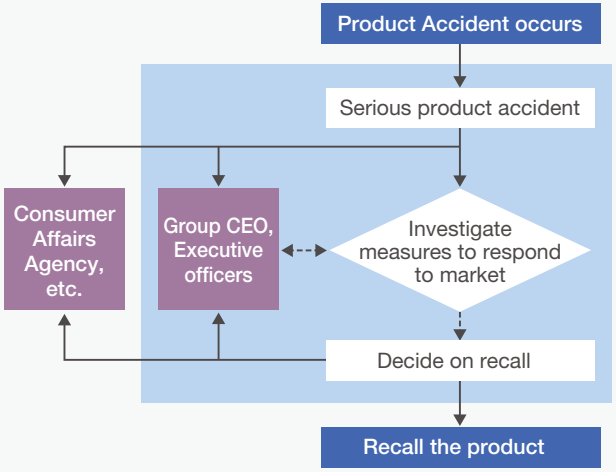
WEB **Panasonic Product Vulnerability Hotline**
https://holdings.panasonic/global/corporate/product-security/psirt.html

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, a section at PHD/PEX and each of its Operating Companies and business sites 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.

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:
1. Accidents resulting in death;
2. Accidents resulting in serious injury or illness (injury or illness requiring at least 30 days of treatment), or accidents resulting in physical impediment;
3. Carbon monoxide poisoning; 4. 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. Panasonic promptly releases information on these types of accidents.

*3 Accidents for which Product Safety Group of the Consumer Affairs Council of the Ministry of Economy, Trade and Industry has determined that it remains unclear whether a product was the cause.

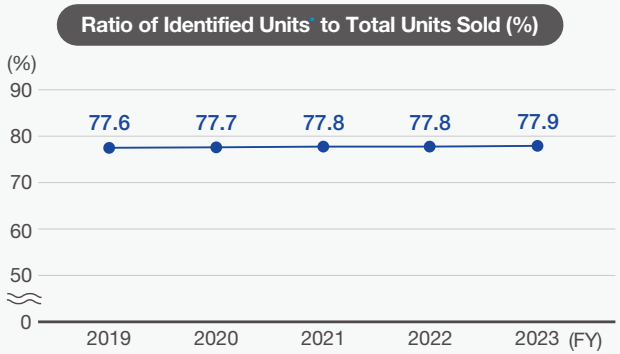
WEB **List of Information Concerning Serious Product-Related Accidents (Japanese only)**
https://holdings.panasonic/jp/corporate/about/products-information/psc.html

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

Eighteen years have passed since Panasonic received an emergency order in 2005 due to an accident involving an FF-type kerosene heater and initiated a Groupwide market response. We continue to work, led by the Corporate FF Customer Support & Management Division staff, to prevent any new incidents. In fiscal 2023, we conducted a campaign to find yet unidentified target products. As part of these efforts, we visited the homes— mainly in Hokkaido, Tohoku, and Nagano—of our customers who had once owned the recalled products, investigated the nearby supply/ exhaust pipes, and conducted surveys of retail customers. We are also continuing all our notification campaigns to promote product recalls among customers who had their units inspected or repaired and to confirm product conditions

before the winter arrives. In fiscal 2023, we added 87 units to our list of products discovered or confirmed to have been discarded. In total, 118,509 units have been recorded, bringing the percentage of units identified to 77.9% of units sold as of March 31, 2023. We were still finding products that our customers had continued using, without realizing the heaters' potential harm, meaning that a high degree of risk remains. We will continue our search. In addition to these market-facing efforts, we are undertaking various internal initiatives. We communicate the progress of these activities through the company intranet in monthly reports. We also pass down the lessons learned from customer safety incidents through lectures given in various training programs and educational materials posted at the Product Safety Learning Square (in Hirakata), the Product Safety Museum (in Kusatsu), and the Learning Center (in Nara), where we educate our employees. We strive to foster a Panasonic Group culture that places product safety first.



* 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.

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, Appliance Company, Panasonic Corporation

WEB 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:

- FY2022 Panasonic IC Reader with facial recognition, Gold Award, Healthcare and Welfare Design Emergency broadcasting equipment, Security and Public Safety
- FY2021 Silver Award: Panasonic LED Torch Light First Shaving Series, Bronze Award

WEB **Panasonic Group Universal Design**
https://holdings.panasonic/global/corporate/universal-design.html

AI Ethics

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.

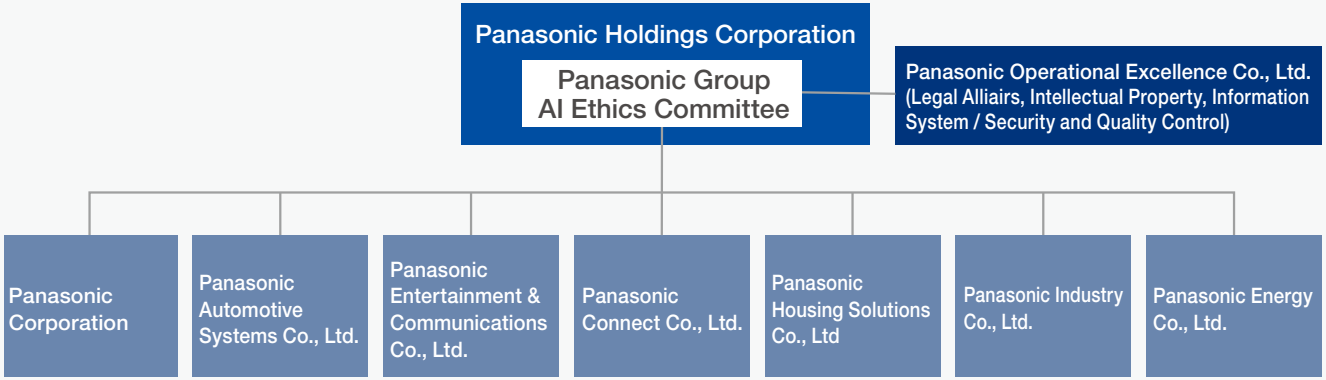
Policy

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 over the long term, 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 Principles (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 Principles as well as relevant laws, regulations, and ethical guidelines for each country. In 2022, we established and published our AI Ethics Principles.

WEB 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's CTO, our head of AI operations (as of August 2023).



The AI Ethics Committee has been established within the Group by the Group CTO, comprising staff members in charge of AI ethics and members from other related departments like legal and information security, and provides the Group with systems and measures to be implemented in relation to AI Ethics Activities and provides Operational Companies with support for their AI Ethics Activities as well as understanding, reviewing, and formulating countermeasures against risks. We have also provided for someone to be responsible for AI Ethics activities at each Operating Company, and these individuals cooperate with the AI Ethics Committee to carry out activities that fit the business and technologies of each company.

For extremely risky AI projects or those with manifest risks, the AI Ethics Committee will propose countermeasures, report the countermeasures to the AI Ethics Committee Chair and relevant Group companies, and then work with these companies to implement the countermeasures.

Education

The Panasonic Group has created training systems and content that we provide to our Operating Companies to be used in AI education conducted by AI ethics committees to enable employees across the Group to execute their work in ways that comply with the principles of our AI Ethics Activities.

In FY2023, Panasonic conducted AI Ethics e-Learning for all employees, including temporary staff, at its Group companies in Japan. Group companies outside Japan also promoted employee education using similar materials. After the e-Learning session, we posted the materials on its intranet to share Groupwide.

Risk Assessment

In 2022, Panasonic introduced a monitoring system to identify the AI ethical risks of Group products. The AI Ethics Committee collects data, including Group employee survey results and risk assessment results, for Operating Companies and analyzes it 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 and remedies or otherwise addresses them across organizational divisions.

External Cooperation

The AI Ethics Committee also conducts other research and outreach related to AI ethics in a variety of ways, including participation in committee activities at external institutions researching AI ethics, as well as in the community, academic, and public sectors. Panasonic was able to participate in drafting the Governance Guidelines for the Implementation of AI Principles laid out by Japan's Ministry of Economy, Trade and Industry at the Expert Group on How AI Principles Should be Implemented.

Consulting and Reporting Mechanisms

The Panasonic Group has created a global hotline that can be used by all Group and business partner employees to report anything they have seen or heard that could be cause for concern with respect to AI ethics. We also have systems set up for general inquiries related to personal information in each country; they respond to concerns about protecting customer privacy. See the following for more details.

- Whistleblowing System in Business Ethics (P138)

- Privacy Policy (for Panasonic Holdings Corporation)

WEB https://holdings.panasonic/global/privacy-policy.html

Customer Relations

Since its foundation, Panasonic has aimed to contribute to society through its products and services, while always putting the customer first. The Group seeks to improve customer satisfaction, and it offers products, solutions, and services that enrich the lives of people around the world. When providing customer service (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.

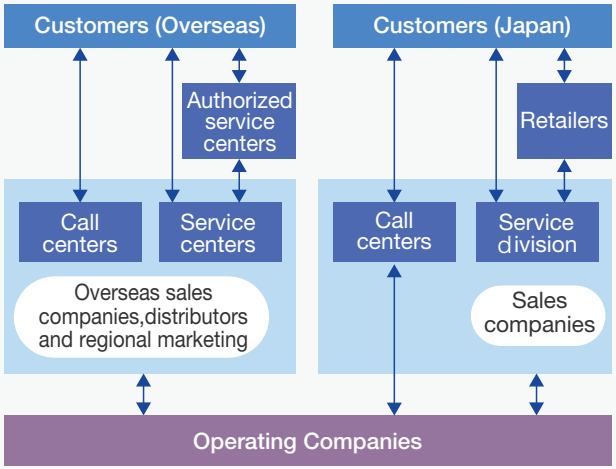
Following the above rules and policies, Each site in Japan has implemented a Management System for Response to Customers as a mechanism for utilizing information received from customers in its management approach. These sites conduct periodic self-audits and make other efforts to improve the quality 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 2023). The CS departments at each of the 8 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.

Customer Relations Structure (as of August 2023)

*Example based on home appliance products



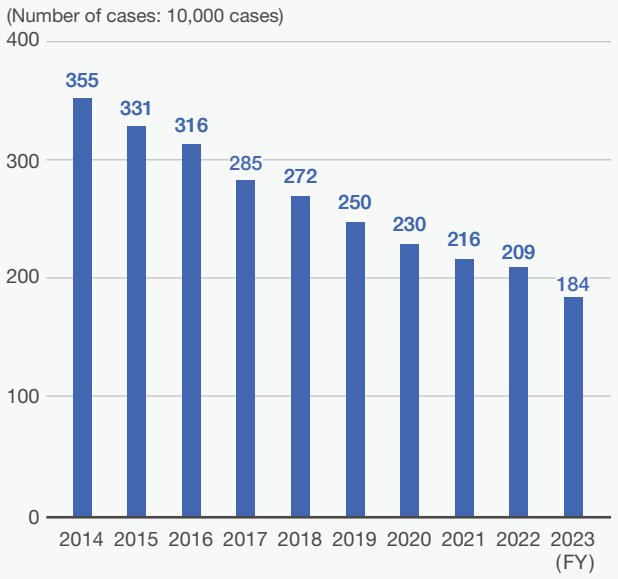
This information is used to ensure the quality and safety of products and to help develop products that match the needs of customers in each department.

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 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. In recent years, the company has also been undertaking initiatives to use Facebook and other social media outlets to post various types of useful 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



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: 99 locations throughout Japan (as of April 2023)
- Number of Service Locations of Panasonic LS Techno Service Co., Ltd.: 43 locations (as of April 2023)

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

Regarding repair services outside Japan, Panasonic sales companies, service centers operated by distributers, and certified service providers provide services that suit the needs of customers and local business conventions. In recent years, 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 have also been working to bolster our response in terms of how we communicate with our customer base as it continues to become more diverse, including initiatives involving new methods for communicating with customers on social media.

Number of Repair Service Centers (FY2024)

Region	Number of Repair Service Centers
Japan*	142
North America	402
Latin America	843
Europe & CIS	886
Southeast Asia & Pacific	1,643
India, South Asia, Middle East & Africa	584
China & Northeast Asia	3,341

*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 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, automotive, 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 companies in charge of commercial solutions, as well as Panasonic Group sales partners, 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.

Automotive Equipment

Concerning automotive equipment, the Panasonic group sales company (Panasonic Automotive Electronics Co., Ltd.) cooperates with dealerships to provide after-service for Panasonic-produced car navigation and other equipment in an effort to improve CS. We are also building organizations and systems that allow early detection and early resolution of nonconforming products to provide rapid and thorough services to meet the needs of car manufacturers in the provision of genuine on board equipment.

Initiatives Related to Improving Customer Satisfaction

Promoting the Acquisition of Consumer Affairs Advisor Credentials

Panasonic Group actively promotes the acquisition by its employees in Japan of the "Consumer Affairs Advisor"* 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, 2023, 306 employees affiliated with the Panasonic Group had acquired this certification.

*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: non-profit organization the Japan Industrial Association.) 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 goals 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 a customer-oriented corporate culture will become even more important in serving our customers in the future, so in Japan we have designated May as “Customer Month” to make it easier for all Group employees to get involved. In accordance with the Japanese government’s designation of May as “Consumer Month” * Panasonic Group actively implements the following unique measures every year in May in order to cultivate such culture in all its employees.

1. The Group CEO sends out a message regarding the “Introduction to the Customer Month”, informing all employees of the significance of this special month.
2. 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 digital signage and the like.
3. We strive to promote a consumer-oriented management by holding a “Customer Month Commemorative Symposium,” which involves the participation of those employees responsible for consumer-related activities, as well as all other employees. In fiscal 2023, we invited a lecturer to give a talk titled “Hospitality at Dotonbori Hotel, a Bridge Connecting Japan to the World: Everything for Our Customers and Employees” to encourage increased understanding of how vital corporate culture reform (how to deal with employees) and unique management strategies are.

* 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 2023 Customer Month poster

Reflecting Voices of Customers in the Products and Services (VOC Activities)

In what we call Voice of Customer (VOC) activities, Panasonic Group uses a variety of methods to analyze customer’s voice in order to improve our business activities. The voices of the company’s 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	STEP2 Analyze the customer’s opinion
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.	Customer opinions are recorded, entered into a database, and analyzed every day.
STEP3 **Identify areas in need of improvement based on customer opinions**	**STEP4** **Learning from our customers’ opinions to improve products, user manuals, etc.**
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.	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.

Educating Consumers to Use Products Safely

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.

In fiscal 2023, we held 122 lectures (around 7,000 participants), mainly at elementary and junior high schools; 118 educational courses (approx. 2,000 participants), including craft classes; and 30 environmental events at various locations throughout Japan.

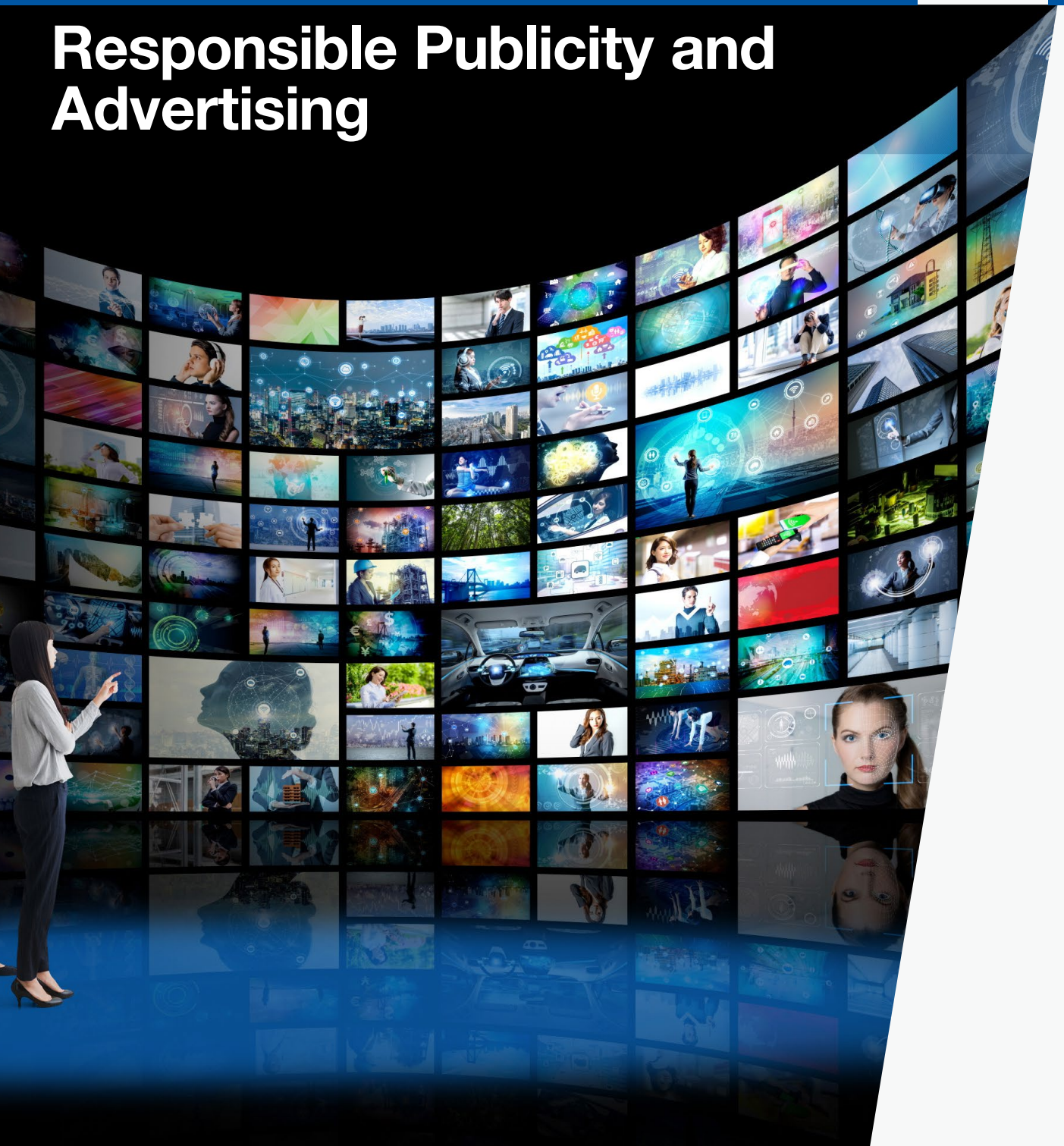
Useful Information on Household Appliances (Japanese only)
https://panasonic.jp/support/useful.html

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 make brands, products, and services more widely known within society. However, they can also adversely impact 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 ran. Therefore, companies must maintain high normative awareness and ethics in their communications.

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 stipulates the following policies regarding our communications with society.

- Through our corporate communications, comprising our public relations and advertising activities, we will provide fair and accurate information on our Basic Business Philosophy, as well as on our products, services and technologies, with the aim of better informing our customers and other stakeholders, thereby enhancing the value of our brands. At the same time, we will continually listen to and observe the public and customers, to learn from them and reflect their opinions in our business, marketing and merchandising activities.
- We value diversity, and we conduct all our corporate communications activities based on the principle of truth-based communications. We will not make representations that are deceptive, misleading, fraudulent or unfair. Our advertisements shall not be defamatory or of a political or religious nature.

We have also created various sets of rules and guidelines, such as 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 in the execution of our corporate communications activities.

Principles concerning Advertising Activities

We continue to follow Our founder, Konosuke Matsushita's idea that "if manufacturers can make good products, they have an obligation to communicate that quickly, widely, and correctly to their customers, and that is what advertising does." In addition, today we see an important social responsibility in communicating widely, not just about our products but also about the full range 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 advertising (creating TV commercials, newspaper ads, digital ads and so on).

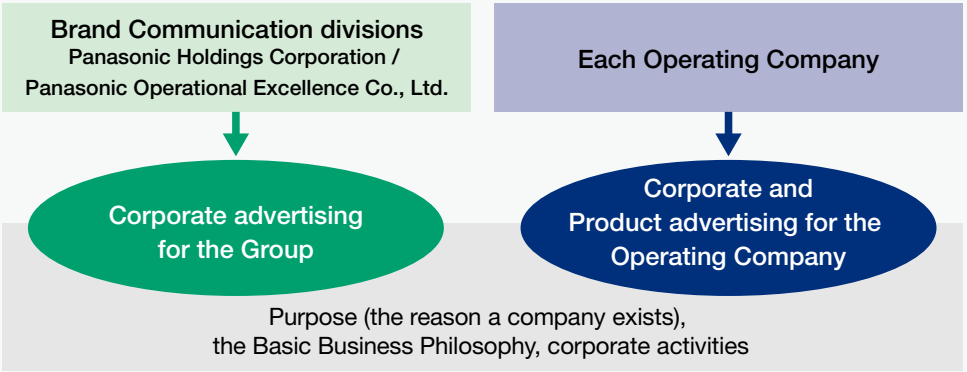
- In the context of our business activities, publicity and advertising fulfill an important social mission.
- It is an activity that conveys the "heart" of our enterprise.
- Facts must be told truthfully, in ways that are easy for our customers to understand.
- We do not cause discomfort or annoyance.
- Always use a creative and innovative approach.
- Approach our work with insight, competence and passion.

Additionally, the media used in all our publicity and advertising campaigns are selected based on their general acceptance in their respective regions, their promotion of brand familiarity, and their cost-effectiveness.

Responsible Executive and Framework

The person in charge of publicity and advertising is the Executive Officer responsible for brand strategy and communication strategy (as of August 2023).

Brand communication divisions of Panasonic Holdings Corporation and Panasonic Operational Excellence Co., Ltd. are responsible for corporate advertising for the whole Panasonic Group. Similarly, advertising personnel at each Operating Company are responsible for their organization's corporate and product advertising. Such personnel all work in cooperation with one another.



Promoting Fair and Honest Publicity and Advertising

We have set up mechanisms that allow us to check all the advertising we produce against the relevant laws and industry regulations in each global region, to avoid misunderstandings or misconceptions on the part of customers. For example, in Japan, we train and deploy personnel specialized in advertising production, accumulate experience and expertise in expression and risk avoidance, screen risks with production partners, review expressions with media and advertising agencies, conduct preliminary studies, and if necessary, seek review from the Legal Department. We comply with the Act against Unjustifiable Premiums and Misleading Representations and other legal regulations concerning advertising, as well as various self-imposed media guidelines companies use to evaluate their advertisements, including the Japan Advertisers Association's ethics code. We also avoid using expressions or performances that undermine childhood education, or that may hinder children's sound learning and growth. When employing child actors in advertisements, we comply with all the relevant laws and regulations.

To ensure we can maintain this compliance, we will continue to conduct OJT on a day- to-day basis and to hold special training sessions for major revisions to relevant laws to ensure that the persons 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.

In fiscal 2023, we received reports of the below violations at a Group company in China (a consumer electronics division) and paid an administrative fine of RMB 28,751.77 to the authorities. We will strive to prevent the recurrence of such violations by strengthening internal check processes and providing compliance training to employees.

① January 2022: A violation of a law on false advertising regarding a hair dryer's online ad that claimed it "improved hair quality"

② May 2022: An erroneous price shown on an ad for a joint campaign with a local airline

Intellectual Property

Panasonic 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.

If the Group's intellectual property is not appropriately protected and utilized, related counterfeit or infringing products may appear, hindering sustainable innovation and potentially leading to quality problems, resources to criminal organizations, and other issues.

In addition, if we infringe on the intellectual property of a third party, there is a risk of causing loss to the third party and inconvenience to the Group's direct and indirect customers due to changes in the Group's product or service specifications, interruptions in supply, or other unforeseen concerns.

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 an intellectual property policy aimed at ensuring the superiority and safety of its business now and in the future by proposing IP-based strategies for its business; acquiring, protecting, and utilizing global intellectual property; and preventing and resolving disputes related to intellectual property. Furthermore, in recent years, we have taken a view to helping address social issues using IP, which has become one of our most important motivations in our IP efforts.

To consistently achieve these goals, the Group has established its "Basic Intellectual Property Regulations" that apply to Groupwide. We are working to appropriately pursue our intellectual property policy 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 2023). The Intellectual Property Department at the Group’s holding company, Panasonic Holdings, and the Intellectual Property Center at Panasonic Operational Excellence Co., Ltd., which was established as a firm to house our advanced specialist human resources in a wide variety of fields, are in charge of establishing and promoting the Group’s intellectual property strategies. We have also created an intellectual property division within each Operating Company, and each Operating Company establishes and promotes intellectual property strategy within that Operating Company. Furthermore, we use trust among Persons Belonging to Same Group of Companies as defined in Article 51 of the Trust Business Act to promote a wide array of intellectual property work meant to integrate and commercialize the work related to intellectual property being done within the Group at Panasonic IP Management, Co., Ltd., a wholly owned subsidiary.

Major Initiatives

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 2023’s R&D expenses; the number of new applications for patents, utility models, or design rights made by Panasonic Group in fiscal 2023; and the number of patents, utility models, designs, and trademarks held by the Group as of March 2023.

Fiscal 2023 R&D expenses	469,800 million JPY (the ratio of R&D expenses to sales: 5.6%)
Fiscal 2023 Number of applications	Number of applications for patents, utility models, and designs: roughly15,000 (including roughly 9,200 outside Japan)
As of March 2023 Number of rights held	Number of patents, utility models, and designs held: Total roughly 99,000 (including roughly 56,000 outside Japan)
	Number of trademarks held: Total roughly 15,000 (including roughly 11,000 outside Japan)

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, 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

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 Relationships for Joint Innovation

The Panasonic Group aims to contribute to solutions to the social issues through our business activities, and in our intellectual property activities as well, it is crucial that we contribute to solutions to social issues by building friendly relationships for joint innovation with our customers and different types of other partners we work with, and we are promoting new intellectual property strategies in the interest of achieving that aim. In the field of energy management and materials, the Group works to build optimal relationships for joint innovation through approaches that combine a variety of intellectual property activities, including a search for partner companies with the use of intellectual property information, the creation of an intellectual property portfolio that is mindful of how it will be used by the joint innovation partner, and the establishment of detailed relationships for joint innovation with contracts.

Moreover, we believe that addressing social issues requires cooperation from diverse yet connected people, goods, and services, so we are working on open innovation rooted in intangible assets. For instance, by transferring our unused patents related to quick-charging technology to an overseas start-up through an outside partner, we are collaborating and supporting that start-up’s business of bringing light to areas without electricity.

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.

In August 2022, we became the first Japanese company to join the Low Carbon Patent Pledge (LCPP), whereby patents related to artificial photosynthesis technology are available for free to any individual or organization under the prescribed conditions stipulated by the LCPP.

WEB The Low Carbon Patent Pledge
https://lowcarbonpatentpledge.org/the-pledge/

Anti-counterfeit activities

Unauthorized use of brands, designs, and other intellectual property have a negative impact not only on companies (brand owners) but also on society. Counterfeit products undermine a company's reputation, which damages its credibility in the eye of its customers. The counterfeit products lead to defective quality concerns, and they can cause accidents and injuries to our customers. Therefore, imitations hinder the creation of a healthy society, such as through:

- 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 their 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-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 in 12 languages, due to, for example, the increasing importance of software in business in recent years. In addition, each Operating Company also provides training and education on intellectual property to meet their specific business needs. In addition, 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 giving lectures at various seminars organized by the Japan Patent Office for overseas governmental authorities and Customs officials in various countries. We also dispatch lecturers to Japanese junior high and high school students to teach the importance of intellectual property. In addition, to address the issue caused by counterfeited products, we manufacture the consumer awareness videos and introduce them at our website and the above-mentioned lectures.

WEB Panasonic's efforts to raise awareness about eliminating counterfeit goods
https://holdings.panasonic/global/corporate/sustainability/sustainability-files/case13.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 "Business Ethics" chapter (on page 138).

Evaluations

Panasonic Group has been recognized as a Clarivate Top 100 Global Innovator 2023 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. Of the 100 companies honored on the 2023 list, 38 were from Japan. Panasonic Group has been on this list since its inception, 2023 being our 12th 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

Basic Policy

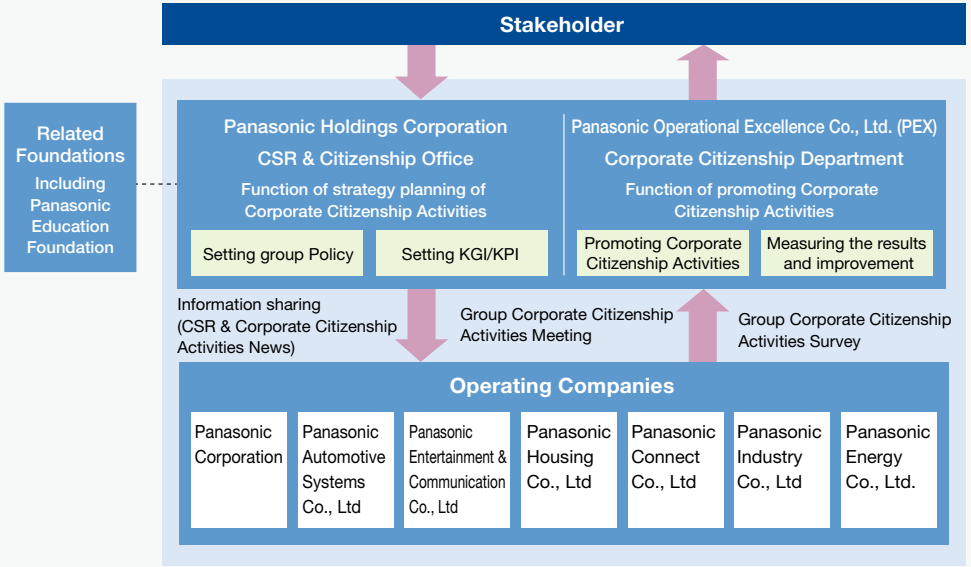
At Panasonic Group we believe that all the resources we need to do business have been entrusted to us by society at large, which is why we act as a public entity of society, having dialogues with local communities as we undertake our business activities.

The Group works to contribute positively to local communities and seek to minimize any potentially negative impacts through dialogues with local governments and residents. Furthermore, we evaluate our effects on the environment and other areas especially when entering or leaving a market.

Also, through our Corporate Citizenship Activities, we are striving to cooperate and develop together with the local communities as a member of those communities.

Management System of Corporate Citizenship Activities

We are engaged in a variety of Corporate Citizenship Activities in every Operating Company and every region around the world, each tailored to the circumstances of that area, based on the Group Policy outlined in the next paragraph. We define key performance indicators (KPIs) for major activities and uses these to evaluate results and make improvements. We continue to think about ways we can better promote the activities we undertake by holding regular Group Corporate Citizenship Activity Meetings where we share information and exchange opinions toward that goal. In addition, through CSR & Corporate Citizenship News, those activities in the various locales are shared with the relevant directors and executives—from the Panasonic Group CEO on down—as well as with the staffs in charge of Corporate Citizenship Activities all over the world. Panasonic Group also conducts annual surveys of its Corporate Citizenship Activities and publicly releases the findings on our Sustainability Data Book.



Policy

Every three years, Panasonic Group drafts a midterm plan and also establishes policies and themes of focus for its Corporate Citizenship Activities. Panasonic determines its areas of focus by comprehensively taking into account company business policies, conditions in society, societal demands, expert opinions, and other considerations.

Midterm Policy of Corporate Citizenship Activities (FY2023-2025)

The Panasonic Group aims to create an ideal society offering material and spiritual affluence, and works to create new value by tackling social issues head-on in both our business activities and our activities as a corporate citizen.

In establishing our midterm policies, we thought about what our ideal world would look like in the year 2030 and decided it would be a “sustainable and inclusive society where everyone can live a vibrant life more freely.” As a corporate group that does business globally, we have selected issues that we should be prioritizing based on global social issues and the Group’s Basic Business Philosophy.

Of all the issues the world has been facing recently, poverty of various types—not only in both newly developed and developing countries but also in developed has become particularly serious. The U.N.’s Sustainable Development Goals (SDGs) include 17 goals comprising a total of 169 different targets that have been included as part of a plan of action for humanity, the earth, and prosperity. Poverty is one of the top concerns of these SDGs. Panasonic Group’s founder, Konosuke Matsushita, saw poverty as an evil and he made its eradication the mission of his company.

Living standards have been raised for many and some poverty has been alleviated, but there are still many countries and regions that have been excluded from wealth, and even within nations considered to be “developed,” disparities in wealth are growing larger. Considering this background, for the 100th anniversary of our founding (in 2018), we set “ending poverty” as a priority theme in our effort to realize the inclusive society.

We again raised our focus to critical for our continued environmental efforts when we revised our Basic Business Philosophy in October 2021, which states that “global environmental issues are a top priority for the Group to work together on,” and will expand this to our Corporate Citizenship Activities from fiscal 2023 onward.

We are working to build upon these solutions toward solutions for poverty and environmental issues with a critical focus on human development (learning support) who will be working on these initiatives. In our “learning support” that encourages the next generation to want to learn, we provide places for learning and practice, valuing the perspective of diversity, equity, and inclusion (DEI), where all individuals accept and leverage their individuality.

We would like to solve social issues and contribute to the realization of a sustainable and inclusive society through Corporate Citizenship Activities including those helping to end poverty, protect the environment, and boost human development (learning support). We encourage our employees to actively participate in Corporate Citizenship Activities, and we will also make use of our products, technologies, know-how and resources cultivated through manufacturing, to work together with all stakeholders.

WEB **Corporate Citizenship Activities**
https://holdings.panasonic/global/corporate/sustainability/citizenship.html

Responsible Executive and Framework

The Executive Officer in charge of CSR and Corporate Citizenship Activities is responsible for Groupwide Corporate Citizenship Activities.

The CSR & Citizenship Office at Panasonic Holdings Corporation (PHD) is responsible for the function of strategic planning for the entire Panasonic Group and 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 people in charge of Corporate Citizenship Activities at each Operating Company, and those individuals execute their activities based on both the Group's policies and actual conditions in their areas.

Employee Participation and Supporting Systems

Enhancing employee interest in social issues and their desire to solve them is extremely important both in terms of promoting Corporate Citizenship Activities and in carrying out our core business. We provide our employees with information on volunteering, occasions to change their awareness and opportunities to gain experience in addressing societal issues, so they can easily get involved. Some of the most characteristic examples of these are shown below.

■ Activities supporting employees' social involvement

Provision of Sustainable Seafood* at Corporate Cafeteria (Japan)

Panasonic was the first company in Japan to permanently introduce sustainable seafood* in its company cafeterias. The initiative, which started in March 2018 at two locations, is now in place at 56 locations in Japan (as of March 31, 2023). Through awareness campaigns that provide cafeteria dining experiences or information on the world's critically endangered marine resources, we aim to encourage individuals and their families to change their consumption behavior and increase their impact on their surroundings.

* Sustainable seafood with certifications such as MSC and ASC

WEB **Conservation of Biodiversity through Collaboration with and Support for NGOs and NPOs**
https://holdings.panasonic/global/corporate/sustainability/environment/biodiversity.html#biodiversity_04

Fukushima Reconstruction Support Action (Japan)

This initiative supports post-disaster reconstruction in Fukushima Prefecture and SDG #11 (sustainable cities and communities) by eating foods in the company cafeterias that use aquaculture products from that prefecture. This initiative was first launched in January 2022 at two company cafeterias. We have extended this initiative to 20 locations within Japan (as of March 2023). We continually run programs to provide employees with accurate information about the various efforts Fukushima Prefecture is making to ensure food safety and security, with our Fukushima Marché [Market] selling products from Fukushima Prefecture as part of that.

WEB **Fukushima Reconstruction Support Action**
https://holdings.panasonic/global/corporate/sustainability/citizenship/other.html#fukushima

LIGHT UP THE FUTURE "AKARI Action Project"

This is a donation program that collects employees' welfare cafeteria points and the proceeds from selling used books and other secondhand items that have been donated to our partner company, a secondhand book shop. The program then uses the collected funds to donate Panasonic products, such as solar lanterns, to areas without electricity. This enables study, work, and medical treatment at night. We developed this donation platform to allow the public to easily participate in the donation program and to maintain the effects of bringing light to areas without electricity in Asia and Africa in the 100 Thousand Solar Lantern Project, which was completed in January 2018. In fiscal 2023, a total of 456 employees donated cafeteria points, and we collected 28,715 secondhand items, including from the general public.

WEB **LIGHT UP THE FUTURE "AKARI Action Project"**
https://holdings.panasonic/global/corporate/sustainability/citizenship/solution/akari.html

Pro Bono Program (Japan)

We have programs in which employees use the skills and experiences that they have gained through their jobs to support NPOs/NGOs' enhancement of business extension, who are addressing social issues. So far, a total of 364 Panasonic Group employees have participated in the Pro Bono Program in Japan, providing support for 61 organizations, by formulating midterm plans, drafting marketing materials, and rebuilding websites.

WEB **Panasonic NPO/NGO Support Pro Bono Program**
https://holdings.panasonic/global/corporate/sustainability/citizenship/pnsf/probono.html

Panasonic ECO RELAY for a Sustainable Earth

In 1998, Panasonic began promoting Love the Earth Citizenship Activities in Japan, aiming to foster greater environmental awareness and even lifestyle changes by encouraging employees and their families to actively engage in environmental activities at home and in their local communities. Since then, we have expanded our efforts in local communities and changed the name to Panasonic ECO RELAY for a Sustainable Earth. In fiscal 2023 as well, we have reaffirmed environmental initiatives as a priority, with ECO RELAY as one of the core components of these initiatives, which includes preserving biodiversity among its many objectives.

WEB **Panasonic ECO RELAY for a Sustainable Earth**
https://holdings.panasonic/global/corporate/sustainability/citizenship/environment/per.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 Europe, some Group companies support volunteer work at the Paris 2024 Olympics and Paralympics. 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 provide a website where employees can find regularly updated information on volunteer opportunities by NPOs and encourage them to take part in volunteer projects outside the Group as well.

Providing learning opportunities (Japan)

In order to raise interest in and motivation to solve social issues, we hold an after-work lecture called the “Social Good Meetup (SGM)”, where various outside experts on social issues give presentations, and a “Disaster Volunteer Training Course” where employees can gain knowledge and skills that will enable them to serve as a volunteer when common disasters occur. We also conduct e-Learning for employees once a year to provide opportunities to learn about social issues, such as the problems related to SDGs.

WEB **Lectures for employees regarding social issues, Social Good Meetup(SGM) (Japanese only)**
https://holdings.panasonic/jp/corporate/sustainability/citizenship/sgm.html

WEB **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

- **Time off for volunteering**
  We encourage Group employees to spend five of the 25 days of annual paid leave offered by the Group participating in volunteer activities, for example by considering allowing time off to be taken at a stretch if it is used for volunteering.
- **Volunteering Sabbatical Leave System**
  This system is meant to allow employees to take up to one year of leave for the purpose of participating in volunteer activities. Furthermore, employees are also granted leave for the time needed to participate in the Japan Overseas Cooperation Volunteers Program run by the Japan International Cooperation Agency (JICA).
- **Challenge Vacations (Life Juncture Vacations)**
  We also have a system in place that allows employees to take leave at critical junctures in their life in the Group to allow them to refresh both body and mind and work on personal growth so that they can approach their life in the Group with renewed ambition. Employees (excluding management) can take 10 days of leave upon turning 30, 40, and 50, and this leave can also be used toward volunteer activities.

Examples from North America

Panasonic North America provides systems that allow employees to spend up to five full working days on volunteer activities so that each regional company can make its own contribution as well. 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 will allow employees to take up to 16 hours a year of paid leave for volunteer work during working hours, effective May 1, 2023.

Performance Evaluation of Corporate Citizenship Activities

We measure the effectiveness of its main activities according to the specifics of each initiative.

The Panasonic NPO/NGO Support Fund for SDGs (formerly the Panasonic NPO Support Fund)

Regarding the Panasonic NPO/NGO Support Fund, 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. And a third party also quantitatively and qualitatively evaluates the effectiveness of the enhancement of the organizational infrastructure. In fiscal FY2022, in addition to the follow-up survey, and as a milestone of the 20th anniversary of the establishment of the Support Fund, 63 organizations participating in the Children and Environment category that we subsidized from 2011 to 2018 and 23 organizations participating in the AFRICA category were evaluated for the 20th anniversary of the subsidy.

The results of the survey for organizations related to children and the environment showed an average rate of expansion of 19.1% in financial terms compared to before the support, as well as an average 27.8% increase in the number of staff. The results also indicated that 87.2% of all organizations saw the number of individuals receiving benefits rise, with an average of a 3.07-fold increase and the organization with the largest increase in beneficiaries rising to 14.9 times the number prior to support, demonstrating that our efforts toward Organizational Infrastructure Enhancement through this support program have been effective in producing major social results.

In the category of support we’ve provided in terms of PR, messaging and education projects

to NPOs and NGOs working on issues in countries across Africa, the results of the survey showed that 64% of all organizations responded that they had continued to see the effects of the PR tools created through the support for at least two years afterwards, and 29% had seen continued effects for it at least five years. In a qualitative survey, we also found cases in which the support led to improvements in training for the volunteers who would be in charge of getting the message out and a greater capacity to procure funding, among other benefits.

In 2015, we conducted Social Return on Investment (SROI) assessments on a supported organization, the NPO Allergy Support Network, and the results showed that the social impact of the aid to enhance organizational infrastructure was 8.82 times as much as the donated funds. We submitted this report to Social Value International (UK), and received confirmation as the first SROI report in Japan.

WEB Panasonic NPO/NGO Support Fund for SDGs
https://holdings.panasonic/global/corporate/sustainability/citizenship/pnsf/npo_summary.html

Kid Witness News (KWN)

We have had the effectiveness of our Kid Witness News (KWN) educational program—designed with the goal of teaching creativity, communication skills, and teamwork through video production—evaluated by a third party over the last five years, beginning in 2017.

The evaluation, which was conducted based on the qualitative and quantitative results of surveys and interviews given to children, students, and instructors at participating schools considered the effect that the program had on children, students and their educational activities with respect to the five items below.

1. The qualities and skills of children who showed potential for growth through the video production included in the program were organized into 9 competencies: social ideology, teamwork, communication, building human relationship, ability of designing own future, information utilization, decision-making ability, interest and understanding of local community, and international understanding.
2. Comparing children and students who participated in the program with those who did not, children who participated were found to have exhibited growth in qualities and skills the 9 competencies.
3. Based on the results of surveys given to teachers and instructors, it was confirmed that they were able to use the program in four types of educational activities: strengthening video production skills, deep learning using video production, achieving personal growth and developing social skills through teamwork, teamwork combined with deep learning.
4. By dividing the survey results by school type (elementary, middle, and high schools), it was found that children grew through video production they did on this program regardless of their developmental stage. In addition, the qualities and skills of children and students at schools that were continuing the program grew much more than those of children at schools participating in the program for the first time.
5. Surveys of the program at special-needs schools demonstrated the effectiveness of the program as one with the potential to help develop the qualities and skills of children regardless of their disability status.

WEB Verifying positive impact of participation in video production in KWN program (Japanese only)
https://holdings.panasonic/jp/corporate/sustainability/citizenship/kwn/overview/teachersguide_eval.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 before and after the program to make improvements by seeing its usefulness and how it influences change in students.

WEB Survey Report: Key Findings from the Program School Survey in Fiscal 2022 (Japanese only)
https://holdings.panasonic/jp/corporate/sustainability/citizenship/career/powerup/220330.html

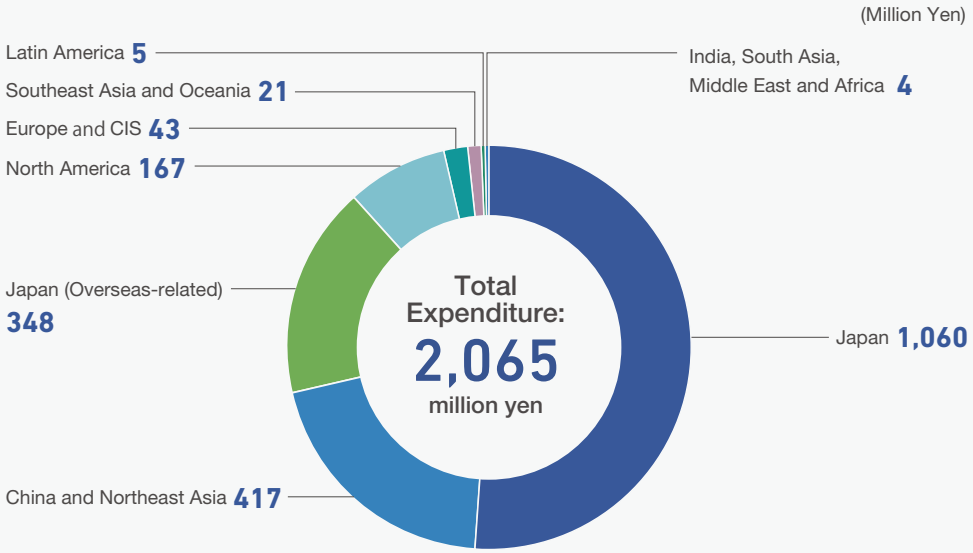
External Recognition and Awards Won

Panasonic Group received the following awards in FY 2023.

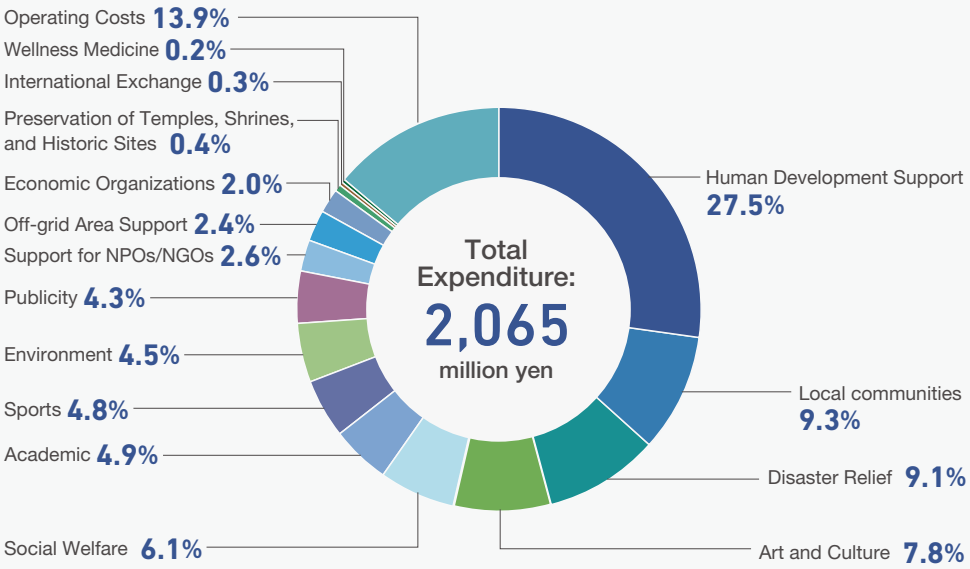
- **Won the Grand Prize for the 20th Corporate Philanthropy Award sponsored by the Japan Philanthropic Association**
  Panasonic NPO/NGO Support Fund for SDGs
- **Received the Vietnam National Environment Award sponsored by the Ministry of Natural Resources and Environment**
  Panasonic Vietnam
- **Winner of a Practical Award under the Corporate Division of the 30th Yokohama Environmental Activity Award**
  Panasonic Automotive Systems Co., Ltd.
- **Won the Cultural Promotion Award of the 17th Awards of the Foundation for the Promotion of Western Art**
  Panasonic Shiodome Museum of Art
- **Certified as a Platinum Partner (for the tenth consecutive year)**
  Table For Two's Meal Sharing Program in developing countries
- **Awarded the Medal of Honor with Dark Blue Ribbon**
  For donations to the World Wildlife Fund (WWF) Japan's "Partnership to Protect the Ocean's Natural Treasures: Working to Promote a Sustainable Marine Economy"

Spending on Corporate Citizenship Activities in fiscal 2023 (April 1 2022 - Mar. 31 2023)

by Region



Composition Ratio by Field



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 considers it a vital management issue to accurately identify risks and take appropriate countermeasures to ensure the achievement of its business objectives and sustainable and stable development. Thus we have formulated the Panasonic Group Operational Rules for Risk Management (the "Basic Rules"), and we promote Group risk management based on these. The Basic Rules list the three objectives of risk management: "ensure the safety and security of our stakeholders and compliance in our business activities,""strengthen our business competitiveness through risk management that treats appropriately both opportunities and threats to the achievement of our business objectives," and "continuously offer products and services by maintaining operating resources and ensuring work effectiveness while fulfilling our social responsibility." In addition to providing guidelines for directors and employees to achieve these objectives, the Basic Rules also clearly define a framework for risk management, as well as the roles and responsibilities of the holdings company, Panasonic Holdings Corporation (PHD), and the Operating Companies.

Risk Management System

The Group considers risk management and formulating and executing strategies as the wheels of business management. As these inseparable wheels function to ensure business objective achievement and corporate value enhancement, risk management plays an important role in our group management.

In order to establish an effective risk management system, the Group promotes a process of linking the construction of appropriate frameworks with the PDCA cycle of management and business strategies under the Basic Rules, which reflect the standards of ISO 31000, an international standard for risk management systems, and COSO-ERM (2017), an international risk management framework. Through regular reports to the Board of Directors, we provide risk information to contribute to business and strategy discussions and receive supervision on establishing and operating our risk management systems. By operating and continually improving its risk management systems, the Group will utilize changes in the business environment as opportunities to contribute to the improvement of people's lives and the development of society through our business. We will also appropriately disclose risk information to society and enhance the transparency of our business management to reassure our customers, business partners, neighbors, shareholders, employees, and other stakeholders.

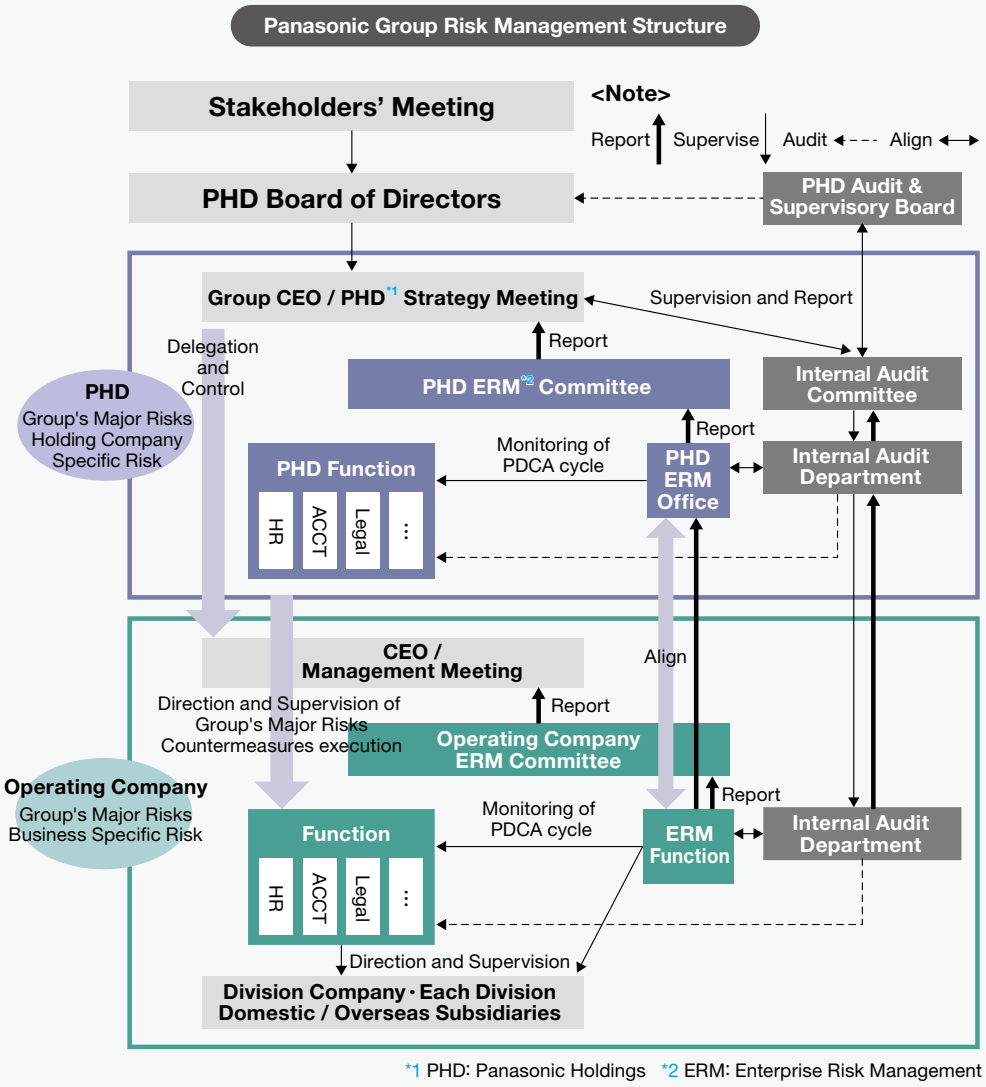
Risk Management in the Value Creation Process

Responsible Executive and Framework

The Group Chief Risk Management Officer (Group CRO), an Executive Vice President, supervises the promotion of risk management within the Group. Moreover, the PHD Enterprise Risk Management Office (PHD ERM), a dedicated risk management department, handles the Group's risk management promotion (as of August 2023).

As an internal system for promoting risk management, the Group has established the PHD Enterprise Risk Management Committee ("PHD ERM Committee")—normally held three times a year and chaired by the Group CRO and comprising individuals representing PHD Legal, HR, Accounting, and other functions—with the PHD ERM Office handling the committee's executive office functions. The PHD ERM Committee's role is to both manage risks related to the advancement of Groupwide functions and to confirm that risks that have the potential to impact the Group as a whole are being addressed. In keeping with the Group's principle of autonomous responsible management at each Operating Company, we have also established Operating Company ERM Committees at each Operating Company, through which each Company works with PHD to manage risks that affect the entire Group while simultaneously managing risks that arise due to the business or work of that Company. Information from risk assessments conducted under these frameworks are also used for internal audits. Based on the results of risk assessments, the Internal Audit Department determines themes to be examined and conducts audits of functional departments using a risk-based approach.

The PHD ERM Committee regularly reports to the PHD Strategy Committee and the Board of Directors on important risks to the group's management and countermeasure progress using the PDCA cycle of risk management. Based on these reports, the Board of Directors and Audit & Supervisory Board Members supervise and verify the status of risk monitoring and the effectiveness of the risk management process. All Operating Companies also have ERM committees that regularly report to their management teams and the Board of Directors.



*1 PHD: Panasonic Holdings *2 ERM: Enterprise Risk Management

Basic Framework

The Group promotes risk management based on an identical process at PHD and the Operating Companies.

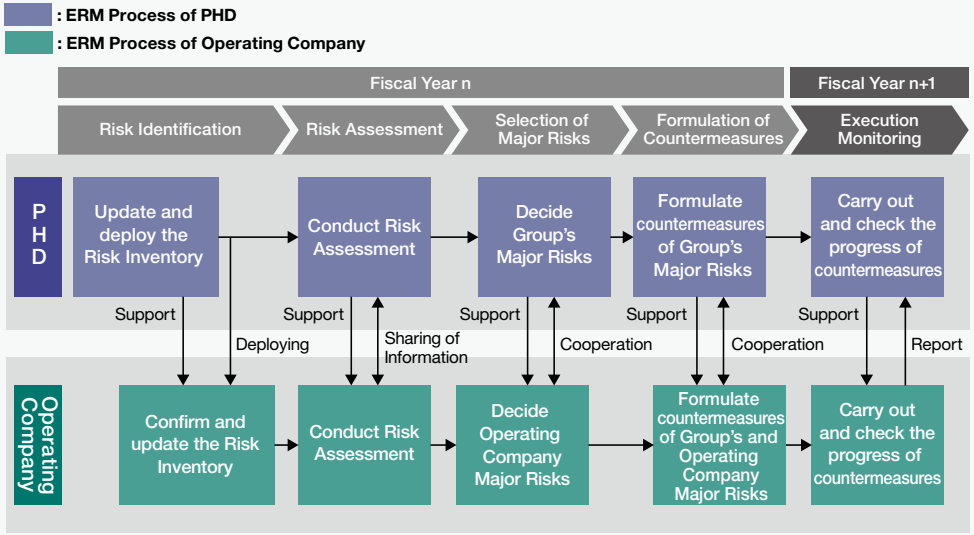
The Group defines “operational risks” as operational “losses” or “threats” that potentially affect the Group’s business activities. The Group updates its “risk inventory” annually by comprehensively identifying possible operational risks based on external and internal changes. It conducts risk assessments according to financial and non-financial evaluation criteria for all risks in the inventory. The PHD ERM Committee considers the Group’s management, business strategy, and social responsibility when deliberating on these assessments to determine significant risks to the Group’s management (the “Group’s Major Risks”).

Each Operating Company conducts risk assessments and determines the significant risks to its management (the “Operating Company Major Risks”) using the Group’s common evaluation criteria and a risk inventory that includes risks specific to the Operating Company with the Group’s common risks. PHD ERM reports each Operating Company’s risk assessment results and the Operating Company Major Risks to the PHD ERM Committee to determine the Group’s Major Risks.

Once the Group determines its and its Operating Company Major Risks, PHD and each Operating Company work toward continuous improvement to formulate and implement countermeasures and monitor their progress. Especially for the Group’s Major Risks, the functional divisions in charge of each risk at Operating Companies formulate and implement their own countermeasures according to their business profiles and the Group’s common countermeasures, in cooperation with PHD’s functional divisions. The PHD functional divisions monitor the progress of the Group’s common and each Operating Company’s individual countermeasures to ensure a thorough response by the entire Group.

In our risk assessments, we have traditionally evaluated materiality based on financial impact and frequency of occurrence. However, we have added human life as an impact factor in our risk assessment with recent outbreaks of infectious diseases, increasingly intense natural disasters, and heightened geopolitical tensions. Considering the importance of corporate social responsibility (CSR), the SDGs, ESG, and other social imperatives, we also incorporate items related to the risk of not meeting these expectations (including human rights, labor compliance, and environmental issues) and evaluation factors related to the Group’s social impact (including our reputation) into our risk assessment framework. Our risk management efforts will strengthen our efforts to comply with laws and regulations, a prerequisite for business activities. At the same time, we will continue to aim for a high level of integrated risk management for the entire Group, treating it as an opportunity to contribute to society and our customers.

Basic Framework of Risk Management



FY2024 Group Major Risks/ PHD Major Strategic Risk

■ Group Major Risks (Operational Risk)

- Earthquakes, tsunamis*1
- Floods and landslide disasters*1
- Infectious disease outbreaks/pandemics*2
- Terrorism, war, riots, and political unrest
- Occupational accidents
- Trade regulations/Economic sanctions
- Antimonopoly Act violations/Any bribery involving government officials
- Cyberattacks
- Any wrongdoing and/or scandals involving suppliers (Information leakage, product security, environmental protections, human right compliance)

■ PHD Major Strategic Risks (Strategic Risk)

- Climate change response・Environmental regulations/Development of a circular economy
- Geopolitical risks and economic security issues
- Attracting, acquiring, and retaining human resources

*1 Refer to the BCM/BCP policies
*2 Refer to our Response to the COVID-19 Pandemic

■ Group Major Risks in Fiscal 2024

Related to “operational risks” that may be operational “losses” and “threats” and potentially affect the Group’s business activities, we have identified the following major risks to the Group’s management in fiscal 2024:

Terrorism, war, riots, and political unrest

In preparation for the emergence of political unrest or military tension in countries or regions with Group sites, or in the event of terrorism or riots, the Group is promoting the development of BCP that takes geopolitical risk response into consideration and the safety measures at normal time by each function in order to strengthen the response to emergency situations giving the utmost priority on human lives.

Occupational accidents

In accordance with laws and regulations and the Panasonic Group’s Basic Business Philosophy, we promote health and safety initiatives with the establishment of the Occupational Safety and Health Policy and the Occupational Health and Safety Management Regulations, which have set forth standards for ensuring employees’ safety and health, achieving a comfortable workplace, and preventing workplace accidents. Moreover, we have established the Central Health and Safety Committee under the Group Health and Safety Management department. This committee discusses, sets, implements, and monitors material health and safety policies and strategies for the health and safety organizations established at Operating Companies and workplaces it supervises.

In addition, we hold the Health and Safety Forum, which those responsible for health and safety at each Operating Company attend to promote autonomous health and safety management throughout their organizations, as well as training sessions for management to share knowledge and foster awareness. For more details, see the “Work in safe, secure and healthy state” section (on page 83).

Trade regulation/Economic sanctions

Laws and regulations in various countries are changing continuously; the Group closely monitors these trends and collects information on a daily basis through global cooperation to quickly identify new trade restrictions and sanctions that may affect our business, and responds by updating our global policies and guidance as necessary. We also thoroughly assess how new regulations may apply to cargo and technologies. Moreover, we work to further strengthen compliance by raising awareness among employees in Japan and overseas and disseminating internal information and countermeasures to avoid transaction risks. Once we have this understanding, we respond by updating our global policies and guidance as needed and assess

whether our goods or technologies are in fields subject to new restrictions. We are also raising awareness among employees in Japan and overseas to further improve compliance, with efforts including sharing information internally and disseminating countermeasures to avoid transaction risks. For more details, see the “Trade Compliance” section (on page 142).

Antimonopoly Act violations/Any bribery involving government officials

The Panasonic Group Code of Ethics & Compliance stipulates our commitment to fair business practices as a “company as a public entity of society,” clearly stating our compliance with laws, regulations, and corporate ethics, and shares the Group’s basic stance with all directors and employees. Furthermore, we are working to prevent and detect bribery and corruption early through training programs meant to ensure thorough compliance based on global regulations and compliance audits based on a risk-based approach. In addition, we are working to strengthen awareness of ethics and legal compliance by implementing compliance measures for employees throughout the year in response to various risks.

Additionally, as a centralized whistleblower contact point, we have established a global hotline to receive reports from domestic and overseas bases and business partners. We are working to detect and correct problems early through appropriate internal investigations. For more details, see the “Business Ethics” chapter (on page 137).

Cyberattacks

We are working to ensure the soundness of the IT environment and improve its cyber resilience to achieve a higher level of information security. Specifically, we are implementing measures to further expand anomaly monitoring on networks, servers, and PCs, including infrastructure at Japanese and overseas subsidiaries; integrate security monitoring with internal factory monitoring; and strengthen global and centralized security monitoring systems.

In April 2023, we established the Cyber Security Supervisory Office as a new organization to promote a centralized, integrated response to complex cyber security risks involving data, products, factory security, and the overall supply chain. We also appointed cyber security general managers at all Operating Companies to oversee their responses to complex cyber security risks. For more details, see the “Cyber Security and Data Protection” chapter (on page 143).

Any wrongdoing and/or scandals involving suppliers

The Group makes purchases from roughly 13,000 suppliers globally. In recent years, the calls for social responsibility on the part of corporations with regard to their supply chains have grown stronger with each passing day, and this trend can also be seen in legal regulations with new regulations being drafted and going into effect.

We have established the Rules on Supply Chain Compliance stipulating the system and basic policy for promoting responsible procurement activities.

We have also issued the Panasonic Supply Chain CSR Promotion Guidelines stipulating the CSR requirements (including human rights and labor, health and safety, global environmental conservation, information security, and corporate ethics) that we expect our suppliers to comply with. Moreover, we are working to ensure CSR throughout the supply chain by promoting initiatives such as CSR Self-Assessments and audits. For more details, see the “Responsible Supply Chain” chapter (on page 102).

PHD Major Strategic Risks in Fiscal 2024

Along with operational risk management, we are promoting appropriate risk-taking activities using degree-based metrics by considering uncertain events that may become “opportunities” or “threats” to the achievement of business objectives over the medium to long term as “strategic risks” in formulating management and business strategies and making decisions.

We manage strategic risks to enhance the quality of business strategy formulation and decision-making and better ensure that we achieve our business objectives. When faced with changes in the external environment, we consider the direction of risk-taking and implementing countermeasures against these “opportunities” or “threats” in reviewing our business strategy and promoting the initiatives we have taken.

Among the various strategic risks, we select major risks to the Group management (“PHD Major Strategic Risks”) from the viewpoint of necessity for cross-PHD/Operating Companies efforts to realize our vision and mission, and we work to subdivide these risks into units of events that may be “opportunities” or “threats”. We then share these details with the relevant functional divisions, which monitor them in their respective areas of expertise and promote initiatives designed based on this monitoring.

Similarly, each Operating Company defines and manages its “Operating Company Major Strategic Risks” from among the strategic risks related to their respective business strategies.

Climate change & Environmental regulations/Development of a circular economy

With regard to climate change response, we are working to focus on the introduction and expansion of environmental regulations and policies, making the most of the opportunities in related business markets born of changing demand for certain products and services as global warming progresses and the growing awareness of environmental issues while simultaneously reducing losses by strengthening our responses to these issues as threats.

With the development of circular economies due to shortages and restrictions on resources, we are seeking to expand our opportunities for improving corporate value through our proactive

use of renewable energy, while at the same time anticipating greater demand for low-carbon products that use circulative resources. Meanwhile, there is also the possibility that higher production costs and production delays will become frequent or constant due to the increased costs and short supply of circulative resources (recycled materials and raw materials to be recycled). The Group is aiming to expand our business by responding appropriately to both the opportunities and threats presented by the situation.

Geopolitical risks & economic security issues

Through our monitoring of international affairs and trends in national and regional policies, laws, and regulations, we are trying to understand their impact on the Group's business and respond to them promptly. The Group is also working to inspect and restructure its production system from a medium- to long-term perspective, with an eye to diversifying supply chains and considering local production for local consumption. We will also continue to closely monitor the rapid changes in the business environment caused by market decoupling, strengthening of National economic and security policies, and polarizing public opinion, including the threats to our business and opportunities to leverage tax measures based on economic security policies.

Attracting, acquiring, and retaining human resources

As a common Group human resource strategy, we are committed to realizing "Employee Well-Being" so that each and every employee is healthy in mind and body and feels happy and fulfilled in their work through challenging opportunities. Thus, we create safe, secure, and healthy workplaces; support employees' independent motivation to take on challenges and develop their careers; and promote diversity, equity, and inclusion (DEI). Meanwhile, competition to secure competent human resources is intensifying, and we will continue to closely monitor trends in policies and legislation related to human resources, diversity, and promoting women in the workforce in all countries and our competitors. For more details, see the "Employee Well-Being" chapter (on page 80).

Education and Enlightenment for Our Employees

The Group has also established the Panasonic Group Operational Rules for Risk Management ("Operational Rules"), which are subordinate to the Basic Rules and define the standard procedures for the Group with regard to promoting risk management. The Group aims to achieve centralized risk management and its advancement by defining specific procedures for identifying and assessing risks, selecting Major Risks, and formulating and implementing countermeasures. Additionally, we annually update and deploy a risk management guide based on Operational Rules to managers and other personnel in charge of risk management at each Operating Company. This guide aims to share the priority issues, initiatives, and points for process improvement to be promoted during the fiscal year. We hold several briefings each year for personnel in charge of risk management at each Operating Company to share their perspectives and information, aiming to improve their skills and promote effective risk management processes.

Moreover, in Japan, we provide training for new employees, newly assigned CEOs at subsidiaries outside Japan, and employees who will be dispatched to locations abroad on basic knowledge of risk management and how to respond to crisis-related risks to improve their ability to respond to risks when working outside of Japan.

Reporting/whistleblowing mechanism (external and internal)

The Group also maintains a global hotline for domestic and international offices and business partners to report issues related to compliance violations, any type of harassment, procurement, and the like as a means for employees to report hidden risks.

Policies on BCM and BCP

Since 2005, we have been promoting and improving our business continuity management (BCM) efforts to ensure that our production and sales will not be interrupted in the event of an emergency and to resume necessary functions as soon as possible in the event that we are forced to suspend our business activities.

In particular, if a disaster, accident, or other unforeseen event occurs in the Group's supply chain, including at parts suppliers and product delivery destinations, it will affect not only supply shortages and interruptions of parts from suppliers but also the BtoB field. Therefore, we strengthen our BCM initiatives, as we consider it a crucial issue under normal circumstances for the entire supply chain.

■ Major Efforts

The Group has established Corporate Emergency Management Rules wherein we define policies for emergency response, the organizations that should respond, initial response, reporting routes, and the like. We have established the Guidelines on Business Continuity Management (the Guidelines) and have formulated BCPs for each business site; we also formulate BCPs specific to the supply chain, logistics networks, and IT security for each function, including procurement, logistics, and information security. We review the BCP based on the Guidelines as appropriate to improve our Groupwide BCPs and resilience. In fiscal 2023, we revised the Guidelines to incorporate the Japanese Cabinet Office's latest damage projections for a Nankai Trough earthquake and an earthquake with an epicenter in the Tokyo metropolitan area. We included disaster prevention and mitigation measures in response to these projections and clarified the

connections between the BCPs for each function to improve their effectiveness.

In particular, we have conducted a hazard survey about various risks posed by natural disasters such as earthquakes, floods, and tsunamis. We have also shared these findings with each of the Operating Companies and have put priority measures in place, both within our own Group and in our supply chain. The Group is also analyzing the impact of a Nankai Trough earthquake and an earthquake with an epicenter in the Tokyo metropolitan area, treating them as stress events expected to significantly impact the Group's business. Based on the results of these analyses, we enhance the required countermeasures, raise appropriate risk awareness within the Group, and improve risk communication. We have also created a Groupwide Fire and Disaster Prevention Committee to help both strengthen our readiness before contingencies arise and transition rapidly to emergency response systems when an incident does occur. We have created fire and disaster prevention task forces under the Fire and Disaster Prevention Committee, and these task forces work to conduct disaster prevention studies and strengthen our response capabilities, including stockpiling systems. In particular, given the strain that has been placed on the power supply by disasters in the past, we have incorporated emergency power supply equipment into BCPs to ensure business continuity. The Group also runs annual disaster prevention drills based on disaster scenarios. In January 2023, we conducted a Groupwide disaster drill that the Group Emergency Headquarters created based on a Nankai Trough earthquake scenario. Based on the expected difficulties for members of the Corporate Emergency Headquarters to assemble due to the devastating nature of the disaster, we conducted the drill under the assumption that employees who could come together without using public transportation would set up the Corporate Emergency Headquarters. Coordinating with local municipalities, Operating Companies and business divisions conduct annual disaster preparedness and emergency evacuation training drills at each business site as needed.

We also actively work to both prevent incidents and prepare for emergencies when it comes to fires as well, based on the Global Fire Prevention Rules, which govern fire risk assessments, fire prevention and fire extinguishing equipment, fire brigades and firefighting, recurrence prevention, autonomous inspections, fire prevention drills, awareness raising, auditing, and more.

COVID-19 Response

When the World Health Organization (WHO) declared COVID-19 a public health emergency on January 31, 2020, the Group created a Groupwide Emergency Response Headquarters.

Management, procurement, public relations, and other functions responded to issues under the Corporate Emergency Headquarters in cooperation with the emergency headquarters at each Operating Company, ensuring the safety of employees' lives and health as the top priority. As Japan and other nations have eased their COVID-19 restrictions, and Japan has downgraded it to a Class 5 infectious disease under the Act on the Prevention of Infectious Diseases and Medical Care for Patients with Infectious Diseases, the Group has also gradually eased behavioral restrictions while maintaining basic infection control measures. Meanwhile, we will continue to monitor infections in Japan and overseas and administrative trends in each country, responding appropriately to any infection increases or mutant strain outbreaks within cities that may occur due to these measures or loosened behavioral restrictions. Furthermore, as part of our infectious disease preparations during normal times, we are working to maintain employee health and safety and business continuity systems by formulating a BCP for infectious diseases at all business sites and ensuring that we keep appropriate stocks of masks, rubbing alcohol, thermometers, and other similar products.

Business Ethics

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, as we always think about what is right for society and act with integrity and fair play without indulging our self-interests.

With Panasonic Group's involvement in a wide range of business globally, we recognize our constant exposure to noncompliance risks and promote fair business practices in all countries and regions worldwide. That means we respect free and fair competition even when it is fiercest and will not engage in bribery or corruption with government officials or business partners. Thus, we have established the Panasonic Group Code of Ethics & Compliance and various internal compliance rules and regulations. 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

On April 1, 2022, after revisiting the purpose and positioning of the Panasonic Code of Conduct in the context of the environment both within the Group and outside it, and after revising our Basic Business Philosophy, we arrived at a new version of our code of conduct, now titled the Panasonic Group Code of Ethics & Compliance (Code of Ethics & Compliance). This Code encapsulates our revised Basic Business Philosophy and defines the commitments to be fulfilled by each company and every employee within the Panasonic Group as they carry out the Group's business. It has been translated into 22 languages to ensure that it is understood by employees everywhere.

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

Responsible Executive and Framework

Panasonic Group's General Counsel (GC), an Executive Officer, is responsible for group compliance (as of August 2023). As of April 1, 2022, the GC established the Group Basic Compliance Regulations to clarify roles and responsibilities related to compliance in Panasonic Group, while the Group Legal Regulations 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 at the Board of Directors meetings of PHD and each Operating Company and receive appropriate supervision from these Boards.

We also include compliance-related metrics in the compensation calculations for PHD's Executive Officers and Operating Company CEOs.

Internal Communication and Training

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 Department 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.

Moreover, 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.

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. In fiscal 2023, we trained all Group employees on the Code of Ethics & Compliance. (See "Compliance Program" below for the results of the training.)

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. The Panasonic Group carries out programs throughout the year, aiming to instill a global awareness of ethical and legal compliance while also boosting its ability to respond to risks. In recent years, as our business environment and practices have evolved, we have strengthened efforts to accurately identify changes in risks within specific business areas, divisions, countries, and regions, as well as to identify early signs of misconduct and legal violations.

Whistleblowing System

Panasonic Group has established a Global Hotline, a Groupwide integrated reporting mechanism that accepts reports from domestic and overseas sites and from business partners to prevent misconduct and facilitate rapid resolutions to a wide range of compliance issues in 32 languages, 24 hours a day, 365 days a year. 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, how to use the reporting system, FAQs on reporting, and appreciative feedback from whistleblowers—to ensure transparency on the reporting system's operations and encourage employees to use it. In addition, we also ask our business partners to inform their employees about our reporting system in our

CSR Promotion Guidelines for Suppliers and provide a link to the URL of the reporting site on our supplier communication website to 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.

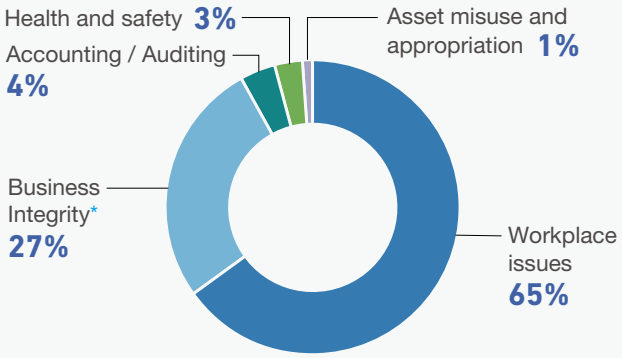
Moreover, employees have other methods for reporting or making grievances. We have an Equal Employment Opportunity Office in Japan that provides consultation on fair treatment in the workplace, sexual harassment, and power harassment, as well as an Auditor Reporting System for assessing the legality 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 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. In fiscal 2023, in response to the revised Whistleblower Protection Act in Japan (effective June 1, 2022), we updated our Internal Reporting and Investigation Rules on April 1, 2022, further defining the whistleblowing and investigation system and related responsibilities and running a Groupwide awareness campaign to improve the system. We will continue to review the reporting system appropriately in light of the internal and external environment and issues.

In FY2023, we received approximately 890 reports and requests for consultation, with 75% of those coming through the abovementioned global hotline. Of all the reports and requests received, roughly 65% were related to issues in workplaces (refer to the chart below). Of all the reports and requests received in FY2023, approximately 29% were substantiated (excludes anything still under investigation as of May 31, 2023). Furthermore, all reports and consultations we receive through the Global Hotline are investigated in cooperation with the relevant departments in accordance with internal rules, and we address issues, prevent recurrence, and handle confirmed cases as necessary.

Content (FY2023)



* Ethical behavior includes concerns related to violation of internal regulations, Conflict of Interest, Bribery, Violation of Laws, Vendor/Customer issues, Fraud, etc.

Performance Evaluation

At each Group company, an executive officer is appointed to ensure observance of the Code of Ethics & Compliance. Education and training are conducted regarding the Code; written pledges regarding the observance of the Code are obtained; and checks are made regarding the status of these items. The results of these audits are also subject to audits by an outside auditing authority as part of Groupwide monitoring.

Serious Violations and Corrective Measures

Panasonic Consumer Marketing Co., Ltd. (now, Panasonic Marketing Japan Co., Ltd.; “PCMC”) was installing air conditioners, TV antennas, and other household appliances under contract with Panasonic’s local home appliance stores. However, it was found to have failed to assign chief engineers to jobs as business operators licensed to perform construction work, among other violations. An investigation by an external committee that began on May 26, 2022, confirmed multiple violations of laws and regulations, including the non-assignment of chief engineers for more than 20,000 construction projects. The causes of the violations included insufficient understanding of the Construction Industry Act, an attitude that trivialized the violations, and inadequate internal controls. The violations then continued due to Panasonic’s erroneous assumptions regarding appliance store activities and insufficient or diminished awareness of the problems among those involved. Based on the recommendations of the external investigation committee, the Group implemented measures such as identifying and reaffirming compliance with the laws and regulations applicable to not only the construction industry but also each of the Group’s businesses and strengthening cooperation between the legal governance, legal, and internal audit departments. Regarding those buildings where construction work was managed by someone other than

a chief engineer, quality verification is being performed at PCMC under the guidance of the investigation committee.

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.

In the past three years, we had no violations subject to fines, sanctions, or disciplinary actions against employees resulting from anti-corruption violations.

Compliance Programs

Panasonic Group is carrying out Groupwide compliance programs that implement measures for mitigating risks such as competition law violations, bribery, and corruption. In fiscal 2023, we put forward the following initiatives to strengthen our compliance infrastructure worldwide:

- Executive-level participation: Each member of the management team, consisting of the Group CEO, Operating Company Presidents, and the business division heads, issued compliance memoranda to employees under their management. Moreover, the Board of Directors and other management meetings regularly hear reports on compliance efforts and conduct discussions or investigations as necessary.
- Compliance awareness and culture: We focused on educating and informing all Global officers and employees about the Code of Ethics & Compliance, revised on April 1, to re-emphasize compliance. We also included questions about compliance awareness and culture in the Awareness Survey distributed to all employees worldwide. In FY2023, we received approximately 150,000 survey responses.
- Training and awareness building: Panasonic offered Groupwide e-Learning on compliance worldwide.
  FY2021: “Conflict of Interests,” “Accounting Wrongdoing” – approximately 140,000 in attendance
  FY2022: “Economic Sanctions Law,” “Data Privacy” – approximately 130,000 in attendance
  FY2023: Approximately 150,000 employees have taken the Code of Ethics & Compliance course. (We provide separate offline training for employees who cannot take the e-Learning course.)
  We also publish a quarterly compliance newsletter for the heads of each business division.
- Global Hotline operations: As described in the Whistleblowing Systems section above, we immediately conduct internal investigations when potential violations are identified through hotline reporting, audits, and the like. After confirming the facts surrounding illegal activities through these internal investigations, Panasonic immediately addresses the violations while analyzing their root causes, implementing measures to prevent recurrences, and taking disciplinary actions against relevant parties.
- Strengthening our investigational function: On July 1,2019, we updated our Groupwide whistleblowing and investigation systems with new global policies: Internal Reporting and Investigation Rules, and Rules on Prohibition of Retaliatory Behavior. (For details, see the section on Whistleblowing Systems.)

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.

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.

Rules Concerning Activity and Relationship with Competitors

In 2008, we established the Rules Concerning Activity and Relationship with Competitors, which apply to all Group employees, for the purpose of preventing behaviors that could lead to cartels or bid rigging, or raise suspicion of such activities. These rules include items such as the following:

- Prohibition of agreements or exchanges of information regarding product pricing, quantities, performance, or specifications that may raise suspicions of cartels or bid rigging
- Prior approval system under which contact with competitors requires the prior approval of the head of the business group and the person in charge of legal affairs
- Responses to inappropriate activities
- Duty of reporting possible violations
- Measures taken in response to violations
- Internal leniency system

Preventing Bribery and Corruption

In addition to preventing the bribery of public 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.

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 public 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. The Policy also specifies procedures for preventing bribery and corruption.

Rules on Third-Party Intermediary Risk Management for Anti-Bribery / Anti- Corruption

These rules are meant to mitigate the risks of bribery and other forms of corruption regarding sales intermediaries or administrative service providers, and to prevent, discover, investigate, and correct actual or potential problems related to these risks. They define the basic rules for screening these business partners.

Rules on Gifts and Hospitality for Anti-Bribery / Anti-Corruption

These rules describe 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 public officials or business partners.

Rules on Conflicts 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.

Furthermore, to reduce the risk of indirect bribery and corrupt practices, we have introduced a risk due diligence tool and risk screening process we use for transactions with sales intermediaries and outsourcing partners in accordance with Rules on Third-Party Intermediary Risk Management for Anti-Bribery/Anti-Corruption. Specifically, we conduct risk assessment and risk mitigation for new transactions while also conducting periodic risk assessments and reviewing risk mitigation measures for existing business partners using a risk-level-based cycle.

A Clean Procurement Declaration was also released in 2004 in procurement divisions. Its aim is to build healthy relationships with business partners to make sure transactions are fair. Panasonic then conducts its procurement following its Declaration. For more details, refer to the chapter "Responsible Supply Chain" (P102).

Panasonic Group has established the "Guidelines for Anti-Bribery and Anti-Corruption (For Business Partners)" that Panasonic Group's business partners are required to follow, with regard to compliance with anti-corruption laws, which prevent bribery, corruption, or other improprieties in connection with Panasonic Group business.

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.

PDF **"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

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

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

Compliance Risk Assessments

The Panasonic Group annually selects 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—published annually by Transparency International, an international NGO—is low, our Compliance Auditing divisions conduct audits on a rotating basis.

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), and obtaining agreement and approval.

Political donations in FY2022: JPY 28.5 million (one donation in Japan)

* The amount of the one FY2023 political donation in Japan will be disclosed by the Ministry of Internal Affairs and Communications (Japan) in November 2023.

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.

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, 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. Panasonic Operational Excellence Co., Ltd. has 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 takes part in the Customs-Trade Partnership Against Terrorism (C-TPAT), while we actively promote participation in the AEO framework in China.

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.

WEB **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, manufacturing 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 manufacturing system and product security. (as of August 2023)

Panasonic Holdings Corporation (PHD) established the Cyber Security Supervisory Office, headed by the Group CIO, to oversee the three aspects of information, manufacturing 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, manufacturing system security, and product security. All Group companies promote security strategies for all functions based on PHD's basic policy and Groupwide regulations.

Major Initiatives

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 provide IT system managers at Group companies with thorough strategies to follow through periodic committee meetings and other means.

Manufacturing 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 use various software-driven products through convenient network connections, 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 systems and rules, including guidelines for promoting security-conscious development. It regularly reviews these systems 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 are training to provide employees skills necessary to ensure product security such as, risk analysis and secure coding, etc.

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

Earning the trust and satisfaction of our customers with our products and services is at the core of our management philosophy. In line with this goal, we recognize that the information and personal information we receive from our customers and other stakeholders are significant assets to everyone involved and valuable management resources to Panasonic. Therefore, we believe we must adequately protect and handle this information. 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.

Therefore, based on the Panasonic Group Code of Ethics & Compliance, which includes information security policies, management rules and guidelines related to information security, and the Basic Information Security Policy and Personal Information Protection Policy established by each Group company, we strive to ensure security and protect personal information. By implementing organizational, technical, and physical security management measures, we accurately record information; properly manage, use, and dispose of it; and prevent its theft, leakage, and falsification. Additionally, we periodically conduct awareness building activities as part of our employee training, and evaluate how we handle information, review it, and implement improvement through internal audits.

We also take necessary and appropriate measures, including thorough management and contract execution, to ensure that contractors properly manage security for the information we provide to them.

WEB **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

WEB **Basic Information Security Policy (an example of Panasonic Holdings Corporation)**
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 2023).
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, established by PHD.

WEB **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, its 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.

Ex.) Panasonic Holdings Corporation

WEB **Panasonic Information Protection Policy**
https://holdings.panasonic/global/privacy-policy.html

WEB **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

At Panasonic, we conduct appropriate information management training and targeted attack drills for all employees to raise their awareness and knowledge so they can manage information properly. We provide information security training according to each employee's needs, including training by organizational level (upon beginning employment, when promoted, and so on) and training for those who directly handle personal information and other information with which the company has been entrusted.

FY2023 Groupwide training achievements

- Training content: Enforcing information security and personal information protection
- Target trainees: All employees of Panasonic Group subsidiary and affiliated companies

External Recognition

Evaluation and certification by major certifying organizations

Indices marked with an asterisk (*) were adopted by the Government Pension Investment Fund (GPIF) to promote ESG investment.

FTSE4Good Index Series

Panasonic Holdings Corporation has again been selected for the FTSE4Good Index Series, one of the world's leading ESG indices. The index was created by FTSE Russell a part of London Stock Exchange Group in 2001, and the company has been included for 23 consecutive years since its launch.

FTSE4Good

FTSE Blossom Japan Index

And Panasonic has become a constituent of the FTSE Blossom Japan Index* since July 2017 when FTSE launched it.

WEB **FTSE website** http://www.ftse.com/products/indices/FTSE4Good

MSCI ESG Indexes

As of 2022, Panasonic Holdings Corporation received an MSCI ESG Rating of AA.

The MSCI ESG Leaders Indexes is one of the world's leading indexes selected by MSCI Inc. of the United States, and Panasonic Holdings Corporation has been a constituent member for 13 consecutive years. In addition to the above, it has been a constituent member of the MSCI Japan ESG Select Leaders Index* since its inception in July 2017.

WEB **MSCI website** https://www.msci.com/esg-indexes

MSCI ESG RATINGS

AA

CCC	B	BB	BBB	A	AA	AAA

In 2022, Panasonic Holdings Corporation received a rating of AA (on a scale of AAA-CCC) in the MSCI ESG Ratings assessment.

2023 MSCI ESG Leaders Indexes Constituent

2023 CONSTITUENT MSCI JAPAN ESG SELECT LEADERS INDEX

GPIF 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 Panasonic Group Investment Fund (GPIF) since 2018.

CDP 2022

The results of the iteration of a 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 information disclosure were announced in December 2022. Panasonic Holdings Corporation received the second highest rating of "A" out of the eight grades in recognition of its efforts for climate change such as reducing CO_2 emissions and setting medium- to long-term targets, and its information disclosure.

CDP DISCLOSURE INSIGHT ACTION

Eco Vadis

Every year, we receive a rating from EcoVadis, an organization that assesses the sustainability of 75,000 suppliers worldwide on behalf of their client companies.

Fiscal 2023 External Awards in Environmental Fields

Panasonic received various awards as results of environmental activities implemented by whole Panasonic group in Fiscal 2023, following the previous year.

Major External Awards in Environmental Fields (Fiscal 2023)

Category	Presenters and awards	Award title	Recipient companies and details	URL
Products & Services	Japan: The Energy Conservation Center, Japan (ECCJ) Energy Conservation Grand Prize 2022	Prize of the Chairman of ECCJ , Product/ Business Model category	Heating and Ventilation A/C Company, Panasonic Corporation Eolia 23LX Series, 'New Breathing Air conditioner' to make Healthy Space for both people and the environment.	WEB https://news.panasonic.com/jp/topics/204984?_gl=1*1fuwg5w*_ga*MjExMDM4MDM4NS4xNjg2NjE2NTQz*_ga_K78QDTE73S*MTY4Nzl1NzQzNy4xNS4xLjE2ODcyNTgzNzYuNjAuMC4w&_ga=2.11385844.1176308736.1687234591-2110380385.1686616543
	Japan: The Japan Electrical Manufacturers' Association (JEMA) The 72nd (Fiscal 2023) Electrical Industrial Technology Achievement Awards	Home Electrical Appliances category Incentive Award	Living Appliances and Solutions Company, Panasonic Corporation Countertop dish washer/dryer with 'a lift-up open door' that has achieved ultimate space-saving with the thinnest depth in the industry.	PDF https://www.jema-net.or.jp/Japanese/info/news/pdf/20221012_gaiyo.pdf
			Panasonic Ecology Systems Co., Ltd. Residential heat exchange system with heat exchange unit and air purifier embedded in ceiling that operate in conjunction with each other.	
	Japan: Japan Gas Association 2022 Technology Award	Gas Technology category Technology Award	Panasonic Corporation and others Development of home smart meter	PDF https://www.gas.or.jp/pdf/gijutsu/TechnologyAward20230411.pdf
	Japan: Japan Institute of Design Promotion 2022 Good Design Award	Good Design Award, Best 100	Panasonic Corporation Hot-Water and Heating system with Heat Pump K & L Series	WEB https://www.g-mark.org/gallery/winners/9745?companies=54d6b6d9-ddac-48a4-b1fb-7f12fe30dfa2&years=2022
		Good Design Award	Electric Works Company, Panasonic Corporation LED Ceiling Lights	WEB https://www.g-mark.org/gallery/winners/10714?companies=54d6b6d9-ddac-48a4-b1fb-7f12fe30dfa2&years=2022
			Panasonic Corporation Eolia application	WEB https://www.g-mark.org/gallery/winners/10985?companies=54d6b6d9-ddac-48a4-b1fb-7f12fe30dfa2&years=2022
	Japan: New Energy and Industrial Technology Development Organization (NEDO) 2022 NEDO Energy Conservation Technology Development Awards	Excellent Business Award	Panasonic Holdings Corporation Development of energy-saving technology in production process by practical use of nano soldering	WEB https://www.nedo.go.jp/news/press/AA5_101607.html
	Japan: The Promotion Foundation for Electrical Science and Engineering The 70th Electrical Science and Technology Encouragement Awards	Electrical Science and Technology Encouragement Award and (Ministry of Education, Culture, Sports, Science and Technology (MEXT) Minister's Award	Manufacturing Innovation Division, Panasonic Holdings Corporation; Panasonic System Networks R&D Lab. Co., Ltd.; and others Development and practical use of wireless power transmission system for 920 MHz band	WEB http://shoureikai.or.jp/awards/
		Electrical Science and Technology Encouragement Award	Manufacturing Innovation Division, Panasonic Holdings Corporation Development of manufacturing technology of low-resistant and high-quality GaN single crystal wafer	WEB https://holdings.panasonic/jp/corporate/technology/awards/list/2022/70th_ohm.html
	Japan: Japan Institute of Invention and Innovation 2022 Commendations for Inventions in Kinki Region	Japan Patent Attorneys Association President's Award	Manufacturing Innovation Division, Panasonic Holdings Corporation; Panasonic Energy Co., Ltd.; and others Cellulose fiber composite resin molding	WEB http://koueki.jiii.or.jp/hyosho/chihatsu/R4/jusho_kinki/detail/benrishi1.html
		Osaka Institute of Invention and Innovation Chairman's Award	Heating & Ventilation A/C Company, Panasonic Corporation Energy-efficient water heating system for own household use, generated by solar power.	WEB http://koueki.jiii.or.jp/hyosho/chihatsu/R4/jusho_kinki/index.html
	Japan: SANKEI SHIMBUN CO., LTD. The 35th (2022) Advanced Technology Awards – Developing originality	Special Award	Manufacturing Innovation Division, Panasonic Holdings Corporation; and Electric Works Company, Panasonic Corporation Development of outdoor lighting equipment with measures against light pollution using narrow flux distribution and highly efficient optical technology.	PDF https://www.sankei-award.jp/sentan/jusyou/2022/09panel.pdf
	Japan: Optics Design Group of the Optical Society of Japan The 25th (2022) Optical Design Award	Optical Design Excellence Award	Manufacturing Innovation Division, Panasonic Holdings Corporation; and Electric Works Company, Panasonic Corporation Development of outdoor lighting equipment with measures against light pollution using narrow flux distribution and highly efficient optical technology.	WEB http://www.opticsdesign.gr.jp/hikari_25th-1.html
	China, Japan and South Korea: 13th (2022) Asia Lighting Conference (ALC)	Innovation Product Award		WEB http://alc.dongchezhineng.com/paper.php?id=14
	Japan: The Illuminating Engineering Institute of Japan The 20th (2022) Lighting Technology Development Award	Lighting Technology Development Award		WEB https://www.ieij.or.jp/award/gijutukaihatu_his.html
	Japan: Ichimura Foundation for New Technology 54th Ichimura Industrial Awards	Contribution Award	Panasonic Industry Co., Ltd. Development of EV-use high-voltage DC relay, using capsule technology to seal by hydrogen.	WEB https://www.sgkz.or.jp/prize/industry/54/document_06.html
Production Activities	Japan Electrical Manufacturers' Association (JEMA) The 71st (2022) JEMA Technical Achievement Award	Committee activities Grand Award	Panasonic Corporation; and others Response and contribution to the new Top Runner Program under the Energy Efficiency Act. Room Air Conditioner Technical Expert Committee, Working Group on Standards for Performance of Room Air Conditioners	PDF https://www.jema-net.or.jp/Japanese/info/news/pdf/20221012_gaiyo.pdf

Independent Assurance Statement by LRQA Limited

LRQA Independent Assurance Statement

Relating to Panasonic Group's Environmental Data within its Sustainability Data Book 2023 for the fiscal year 2022

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 2023 ("the report") for the fiscal year 2022 (from 1 April 2022 to 31 March 2023) 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 the Company and its consolidated subsidiaries in Japan and overseas [1], 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]
  - CO_2 emissions in Business activities (tCO_2e)
  - GHG emissions other than CO_2 from energy use (tCO_2e)
  - Scope 1 GHG emissions (including the breakdown of the GHGs) (tCO_2e)
  - Scope 2 GHG emissions (including the breakdown of the GHGs) (tCO_2e)
  - CO_2 emissions for logistics (tCO_2e) [4]
  - Scope 3 GHG emissions Category.11 (Use of sold products) (tCO_2e)
  - Amount of renewable energy consumption in Business activities (GWh) [5]
  - Energy consumption in Business activity (GWh)
  - Amount of Total Wastes and revenue-generating waste (Tonnes)
  - Water consumption (m^3)
  - Release / Transfer of Substances Requiring Management (Total) (Tonnes) [6]
  - Zeroization of CO_2 emissions (31 plants) [7]
  - Avoided CO_2 emissions to Society (tCO_2e)

[1] Energy consumption in Business activities, Energy-oriented CO2 emissions among Scope 1 GHG emissions, Scope 2 GHG emissions cover 227manufacturing sites and 72 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 227 manufacturing sites in the Company and its consolidated subsidiaries in Japan and overseas. CO_2 emissions in Business activities means the sum of Scope1 and Scope2 GHG emissions.

[2] LRQA undertook a limited assurance engagement of the environmental data marked with "✓" within Sustainability Data Book 2023.

[3] GHG quantification is subject to inherent uncertainty.

[4] Only the logistics in Japan is covered.

[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 33 plants at 31 location which are PANASONIC ECO TECHNOLOGY CENTER CO.,LTD. (PETEC), PANASONIC ENERGY (WUXI) CO.,LTD. (PECW), PANASONIC ENERGY (SUZHOU) CO.,LTD. (PECSZ), PANASONIC MANUFACTURING(BEIJING) CO.,LTD. (PMFBJ), PANASONIC ENERGY (THAILAND) CO.,LTD. (PECTH), PANASONIC DO BRASIL LTD (PANABRAS) (includes 3 factories (San Jose, Extrema, Manaus)), PANASONIC CENTROAMERICANA S.A. (PCA), PANASONIC CENTER TOKYO (PC TOKYO), PANASONIC AUTOMOTIVE SYSTEMS CO.,LTD. (MATSUMOTO AREA) (PAS MATSUMOTO), PANASONIC AUTOMOTIVE SYSTEMS CO.,LTD (TSURUGA AREA) (PAS TSURUGA), PANASONIC AUTOMOTIVE SYSTEMS CO.,LTD (SHIRAKAWA AREA) (PAS SHIRAKAWA), PANASONIC AUTOMOTIVE SYSTEMS CO.,LTD (YOKOHAMA BUILDING) (PAS YOKOHAMA), PANASONIC ENERGY CO.,LTD. (SUMOTO) (PEC SUMOTO), PANASONIC ENERGY HIGASHIURA CO.,LTD. (PEC HIGASHIURA), PANASONIC ENERGY NANDAN CO.,LTD. (PEC NANDAN), PANASONIC ELECTRONIC DEVICES(JIANGMEN)CO., LTD. (PEDJM), PANASONIC INDUSTRIAL DEVICES (TIANJIN) CO.,LTD. (PIDTJ), PANASONIC INDUSTRIAL DEVICES MATERIALS (GUANGZHOU) CO.,LTD. (PIDMGZ), PANASONIC INDUSTRIAL DEVICES SUNX (SUZHOU) CO., LTD. (PIDSXSZ), PANASONIC AUTOMOTIVE SYSTEMS DALIAN CO.,LTD. (PASDL), PANASONIC AUTOMOTIVE SYSTEMS (SUZHOU) CO.,LTD. (PASSZ), PANASONIC AUTOMOTIVE SYSTEMS ASIA PACIFIC CO.,LTD. (PASAP), PANASONIC AUTOMOTIVE SYSTEMS MALAYSIA SDN.BHD. (PASMY), PANASONIC ENERGY INDIA CO.,LTD. (PECIN), PANASONIC AUTOMOTIVE SYSTEMS MONTERREY MEXICO S.A. (PASMT), PANASONIC AUTOMOTIVE SYSTEMS DE MEXICO S.A.DE C.V. (PASMX), PANASONIC AUTOMOTIVE SYSTEMS REYNOSA MEXICO S.A. D (PASRY), PANASONIC ENERGY MEXICO,S.A. DE. C.V. (PEMX), PANASONIC AUTOMOTIVE SYSTEMS CZECH,S.R.O. (PASCZ).

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 assurance[8] and at the materiality of the professional judgement of the verifier.

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 2022; and
- Visiting PANASONIC ENERGY NANDAN CO.,LTD. and Panasonic Ecology Systems Guangdong 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 CO_2 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

It is expected the company to actively seek opportunities for further improvement through the information from sites and other means to ensure efficient and accurate aggregation and calculation of environmental data.

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 – Part1: 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.

[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.

[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 CO_2.

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: 22 July 2023

Ichiro Ueno
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

GRI Standard Contents Index

Our sustainability reporting refers to the Global Reporting Initiative (GRI) Standards.

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2-1	Organizational details	About Panasonic Group WEB https://holdings.panasonic/global/corporate/about.html Sustainability Data Book> Corporate Profile (P.3)
2-2	Entities included in the organization's sustainability reporting	Sustainability Data Book> About the Sustainability Data Book 2023 (P.1)
2-3	Reporting period, frequency and contact point	Sustainability Data Book> About the Sustainability Data Book 2023 (P.1) Sustainability Data Book> Back cover
2-4	Restatements of information	—
2-5	External assurance	Sustainability Data Book> Independent Assurance Statement by LRQA Limited (P.147-148)
2. Activities and workers		
2-6	Activities, value chain and other business relationships	Sustainability Data Book> The Promotion of Sustainability Management (P.5) Sustainability Data Book> Responsible Supply Chain (P.102)
2-7	Employees	Sustainability Data Book> Employee Well-being> Human Resources Data (P.100)
2-8	Workers who are not employees	Sustainability Data Book> Employee Well-being> Human Resources Data (P.100)
3. Governance		
2-9	Governance structure and composition	About Panasonic Group> Panasonic Holdings Corporation> Corporate Governance WEB https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html
2-10	Nomination and selection of the highest governance body	About Panasonic Group> Panasonic Holdings Corporation> Corporate Governance WEB https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html
2-11	Chair of the highest governance body	About Panasonic Group> Panasonic Holdings Corporation> Corporate Governance WEB https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html
2-12	Role of the highest Role of the highest governance body in overseeing the management of impacts	Sustainability Data Book> The Promotion of Sustainability Management(P.5)
2-13	Delegation of responsibility for managing impacts	Sustainability Data Book> The Promotion of Sustainability Management (P.5)
2-14	Role of the highest governance body in sustainability reporting	Sustainability Data Book> The Promotion of Sustainability Management (P.5)
2-15	Conflicts of interest	Corporate Governance Report PDF https://holdings.panasonic/global/corporate/investors/pdf/cgr.pdf
2-16	Communication of critical concerns	Sustainability Data Book> Risk Manamgement (P.130) Sustainability Data Book> Business Ethics (P.137)
2-17	Collective knowledge of the highest governance body	About Panasonic Group> Panasonic Holdings Corporation> Corporate Governance WEB https://holdings.panasonic/global/corporate/about/group-companies/phd/corporate-governance.html Security Report PDF https://holdings.panasonic/global/corporate/investors/pdf/AnnualSecuritiesReport2023.pdf
2-18	Evaluation of the performance of the highest governance body	Security Report PDF https://holdings.panasonic/global/corporate/investors/pdf/AnnualSecuritiesReport2023.pdf Sustainability Data Book> Employee Well-being (P.80)
2-19	Remuneration policies	Security Report PDF https://holdings.panasonic/global/corporate/investors/pdf/AnnualSecuritiesReport2023.pdf Sustainability Data Book> Employee Well-being (P.80)
2-20	Process to determine remuneration	Security Report PDF https://holdings.panasonic/global/corporate/investors/pdf/AnnualSecuritiesReport2023.pdf Sustainability Data Book> Employee Well-being (P.80)
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 WEB https://holdings.panasonic/global/corporate/about/message.html Sustainability Data Book> Our Approach to Sustainability Management (P.4)
2-23	Policy commitments	Sustainability Data Book> Our Approach to Sustainability Management (P.4) Sustainability Data Book> Policies on each theme in each chapter
2-24	Embedding policy commitments	Sustainability Data Book> The Promotion of Sustainability Management (P.5) Sustainability Data Book> Policies on each theme in each chapter
2-25	Processes to remediate negative impacts	Sustainability Data Book> Business Ethics (P.137) Also reported in each chapter
2-26	Mechanisms for seeking advice and raising concerns	Sustainability Data Book> The Promotion of Sustainability Management (P.5) Sustainability Data Book> Business Ethics> Whistleblowing System (P.138)
2-27	Compliance with laws and regulations	Panasonic Group Code of Ethics & Compliance WEB https://holdings.panasonic/global/corporate/about/code-of-conduct.html Sustainability Data Book> Business Ethics (P.137)
2-28	Membership associations	Sustainability Data Book> The Promotion of Sustainability Management (P.5) Sustainability Data Book> Policies on each theme in each chapter
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2-29	Approach to stakeholder engagement	Sustainability Data Book> The Promotion of Sustainability Management> Promoting Initiatives Based on Dialogues with Stakeholders (P.8)
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3-1	Process to determine material topics	Sustainability Data Book> The Promotion of Sustainability Management> Materiality (P.6)
3-2	List of material topics	Sustainability Data Book> The Promotion of Sustainability Management> Materiality (P.6)
3-3	Management of material topics	Sustainability Data Book (described in each material topic chapter)

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Anti-corruption		
205-1	Operations assessed for risks related to corruption	Sustainability Data Book> Business Ethics> Compliance Risk Assessment (P.142)
205-2	Communication and training about anti-corruption policies and procedures	Sustainability Data Book> Business Ethics>Internal Communication and Training (P.138)
205-3	Confirmed incidents of corruption and actions taken	Sustainability Data Book> Business Ethics> Performance Evaluation (P.139)
Anti-competitive Behavior		
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Sustainability Data Book> Business Ethics> Performance Evaluation (P.139)
301: Materials		
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.
301-3	Reclaimed products and their packaging materials	—
302: Energy		
302-1	Energy consumption within the organization	Overview of Environmental Impact WEB https://holdings.panasonic/global/corporate/sustainability/environment/governance/data.html Standard for Calculating PDF https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2023e.pdf
302-2	Energy consumption outside of the organization	Overview of Environmental Impact WEB https://holdings.panasonic/global/corporate/sustainability/environment/governance/data.html Standard for Calculating PDF https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2023e.pdf
302-3	Energy intensity	—
302-4	Reduction of energy consumption	Mid-term to Long-term Environmental Vision WEB https://holdings.panasonic/global/corporate/sustainability/environment/vision.html
302-5	Reductions in energy requirements of products and services	Mid-term to Long-term Environmental Vision WEB https://holdings.panasonic/global/corporate/sustainability/environment/vision.html
305: Emissions		
305-1	Direct (Scope 1) GHG emissions	Overview of Environmental Impact and Environmental Accounting WEB https://holdings.panasonic/global/corporate/sustainability/environment/governance/data.html Reducing CO_2 Emissions in Factories WEB https://holdings.panasonic/global/corporate/sustainability/environment/carbon-neutral/site.html Standard for Calculating PDF https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2023e.pdf
305-2	Energy indirect (Scope 2) GHG emissions	Overview of Environmental Impact and Environmental Accounting WEB https://holdings.panasonic/global/corporate/sustainability/environment/governance/data.html Reducing CO_2 Emissions in Factories WEB https://holdings.panasonic/global/corporate/sustainability/environment/carbon-neutral/site.html Standard for Calculating PDF https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2023e.pdf
305-3	Other indirect (Scope 3) GHG emissions	Overview of Environmental Impact and Environmental Accounting WEB https://holdings.panasonic/global/corporate/sustainability/environment/governance/data.html Standard for Calculating PDF https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2023e.pdf
305-4	GHG emissions intensity	Reducing CO_2 Emissions in Factories WEB https://holdings.panasonic/global/corporate/sustainability/environment/carbon-neutral/site.html
305-5	Reduction of GHG emissions	Mid-term to Long-term Environmental Vision WEB https://holdings.panasonic/global/corporate/sustainability/environment/vision.html
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 signi cant air emissions	Management of Chemical Substances at Factories WEB https://holdings.panasonic/global/corporate/sustainability/environment/chemical.html#factory
306: Waste		
306-1	Waste generation and significant waste-related impacts	Evolution of Recycling-Oriented Manufacturing WEB https://holdings.panasonic/global/corporate/sustainability/environment/resources/recycling_oriented_manufacturing.html
306-2	Management of significant waste-related impacts	Overview of Environmental Impact and Environmental Accounting WEB https://holdings.panasonic/global/corporate/sustainability/environment/governance/data.html Evolution of Recycling-Oriented Manufacturing WEB https://holdings.panasonic/global/corporate/sustainability/environment/resources/recycling_oriented_manufacturing.html
306-3	Waste generated	Evolution of Recycling-Oriented Manufacturing WEB https://holdings.panasonic/global/corporate/sustainability/environment/resources/recycling_oriented_manufacturing.html
306-4	Waste diverted from disposal	Evolution of Recycling-Oriented Manufacturing WEB https://holdings.panasonic/global/corporate/sustainability/environment/resources/recycling_oriented_manufacturing.html Standard for Calculating PDF https://holdings.panasonic/global/corporate/sustainability/pdf/review_sfc_2023e.pdf
306-5	Waste directed to disposal	Evolution of Recycling-Oriented Manufacturing WEB https://holdings.panasonic/global/corporate/sustainability/environment/resources/recycling_oriented_manufacturing.html
307: Environmental Compliance		
307-1	Non-compliance with environmental laws and regulations	Environmental Risk Management WEB https://holdings.panasonic/global/corporate/sustainability/environment/governance/risk.html Reason for Omission/Explanation Confidentiality constraints: We do not disclose the total monetary value because we regard it as a trade secret.
308: Supplier Environmental Assessment		
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.
401: Employment		
401-1	New employee hires and employee turnover	Sustainability Data Book> Employee Well-being> Human Resources Data (P.101) DEI Website> Panasonic Group's DEI in Data WEB https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/fact.html
401-2	Benefits provided to full-time employees that are not provided to temporary or parttime employees	—
401-3	Parental leave	Sustainability Data Book> Employee Well-being> Human Resources Data (P.101) DEI Website> Panasonic Group's DEI in Data WEB https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/fact.html

GRI requirements		Our disclosure
402: Labor/Management Relations		
402-1	Minimum notice periods regarding operational changes	—
403: Occupational Health and Safety		
403-1	Occupational health and safety management system	Sustainability Data Book> Employee Well-being> Work in safe, secure and healthy state (P.83)
403-2	Hazard identification, risk assessment, and incident investigation	Sustainability Data Book> Employee Well-Work in safe, secure and healthy state> Creating a safe and secure workplace (P.83)
403-3	Occupational health services	—
403-4	Worker participation, consultation, and communication on occupational health and safety	Sustainability Data Book> Employee Well-Work in safe, secure and healthy state> Creating a safe and secure workplace (P.83)
403-5	Worker training on occupational health and safety	Sustainability Data Book> Employee Well-Work in safe, secure and healthy state> Creating a safe and secure workplace> Training (P.86)
403-6	Promotion of worker health	Sustainability Data Book> Employee Well-Work in safe, secure and healthy state> Promoting Health Management (P.87)
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	—
403-8	Workers covered by an occupational health and safety management system	Sustainability Data Book>Employee Well-being> Work in safe, secure and healthy state (P.83)
403-9	Work-related injuries	Sustainability Data Book> Employee Well-Work in safe, secure and healthy state> Creating a safe and secure workplace (P.83)
403-10	Work-related ill health	—
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404-1	Average hours of training per year per employee	—
404-2	Programs for upgrading employee skills and transition assistance programs	Sustainability Data Book> Employee Well-being> Work with a sense of fulfillment (P.89)
404-3	Percentage of employees receiving regular performance and career development reviews	Sustainability Data Book>Employee Well-being>Work with a sense of fulfillment> Career Development Support (in Japan) (P.91)
405: Diversity and Equal Opportunity		
405-1	Diversity of governance bodies and employees	Sustainability Data Book> Employee Well-being> Human Resources Data (P.101) DEI Website> Panasonic Group's DEI in Data WEB https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/fact.html About Panasonic Group> Panasonic Holdings Corporation> Corporate Governance WEB 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> Employee Well-being> Human Resources Data (P.101) DEI Website> Panasonic Group's DEI in Data WEB https://holdings.panasonic/global/corporate/sustainability/diversity-equity-inclusion/fact.html
406: Non-discrimination		
406-1	Incidents of discrimination and corrective actions taken	—

GRI requirements		Our disclosure
407: Freedom of Association and Collective Bargaining		
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>Major Initiatives> Respect for the Freedom of Association and the Right to Collective Bargaining (P.78) Sustainability Data Book> Responsible Supply Chain> Supply Chain Due Diligence (P.103)
408: Child Labor		
408-1	Operations and suppliers at signi cant risk for incidents of child labor	Sustainability Data Book> Respect for Human Rights> Major Initiatives>Prohibiting Child Labour and Protecting Young Workers (P.76) Sustainability Data Book> Responsible Supply Chain> Supply Chain Due Diligence (P.103)
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409-1	Operations and suppliers at significant risk for incidents of forced or compulsory labor	Sustainability Data Book> Respect for Human Rights> Major Initiatives> Responsible recruitment and employment (P.77) Sustainability Data Book> Responsible Supply Chain> Supply Chain Due Diligence (P.103)
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412-1	Operations that have been subject to human rights reviews or impact assessments	Sustainability Data Book> Respect for Human Rights> Human Rights Due Diligence (P.76)
412-2	Employee training on human rights policies or procedures	Sustainability Data Book> Respect for Human Rights> Internal Training & External Communications (P.75)
412-3	Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	Sustainability Data Book> Responsible Supply Chain> Suppliers Due Diligence (P.103)
414: Supplier Social Assessment		
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414-2	Negative social impacts in the supply chain and actions taken	Sustainability Data Book> Responsible Supply Chain> Supply Chain Due Diligence(P.103)
415: Public Policy		
415-1	Political contributions	Sustainability Data Book> Business Ethics> Ensuring Transparency of Political Contribution Funds (P.142)
418: Customer Privacy		
418-1	Substantiated complaints concerning breaches of customer privacy and losses of customer data	—

Panasonic Group

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