

Environmental Management

Policy

Creating Value through Panasonic GREEN IMPACT

Converting CO₂ Reduction Impact into Business Growth, Financial Value, and Corporate Value

Creation and Expansion of Economically Rational CE Business

Environmental Action Plan GREEN IMPACT PLAN

Initiatives to raise awareness of and enhance the recognition of avoided emissions

Our Businesses' Contribution to Carbon Neutrality

Response to TCFD

Response to TNFD

Climate Change

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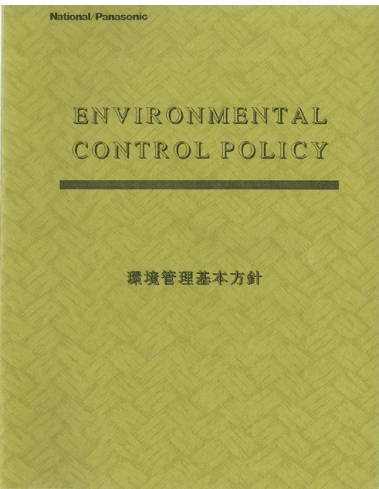
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The mission of the Panasonic Group is realization of an ideal society where people enjoy their lives both materially and spiritually, which is the philosophy of our founder, Konosuke Matsushita: “Happiness through both material and spiritual affluence.” We aim to solve issues in people’s lives and society through our business. In 1932, Konosuke Matsushita proclaimed that we would achieve our ideals over the coming 250 years, which is known as “Meichi,” the revelation of our corporate mission. Since then, we have been proactively working to address a variety of environmental issues, including the pollution problems of the 1970s, under this management philosophy of contributing to the sound development of society.

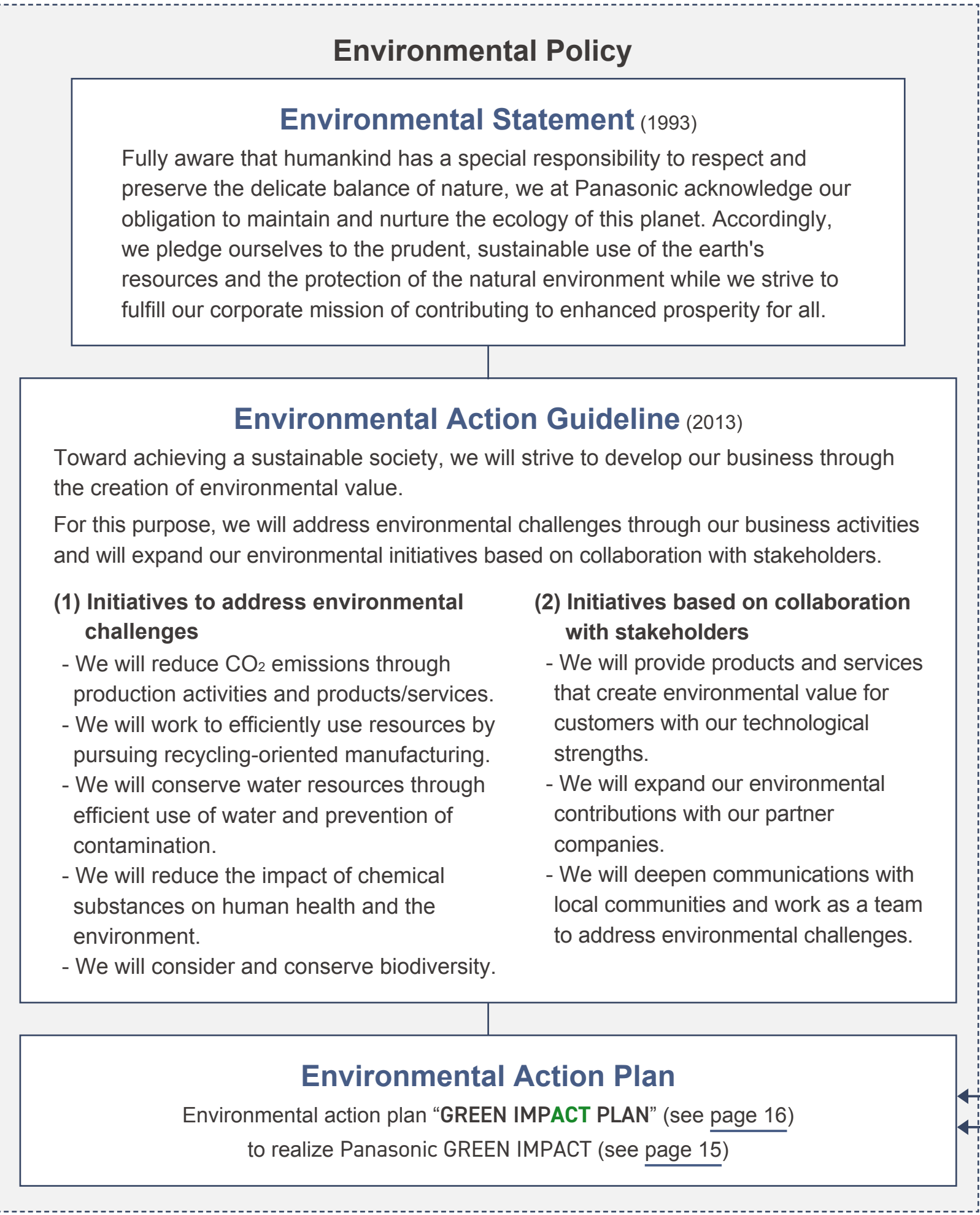
To share our approach to environmental issues, which are spreading on a global scale, we announced our Environmental Control Policy (Matsushita Environmental Charter) in 1991, and our Environmental Statement in 1993. Since then, the Panasonic Group has been demonstrating its commitment to serving society as a public entity and leading environmental activities through united group efforts across the world.

Our current work is based on Panasonic GREEN IMPACT (page 15), the long-term environmental vision announced in 2022, towards achieving our 2050 goals through improving our environmental management over the medium- to long-term.

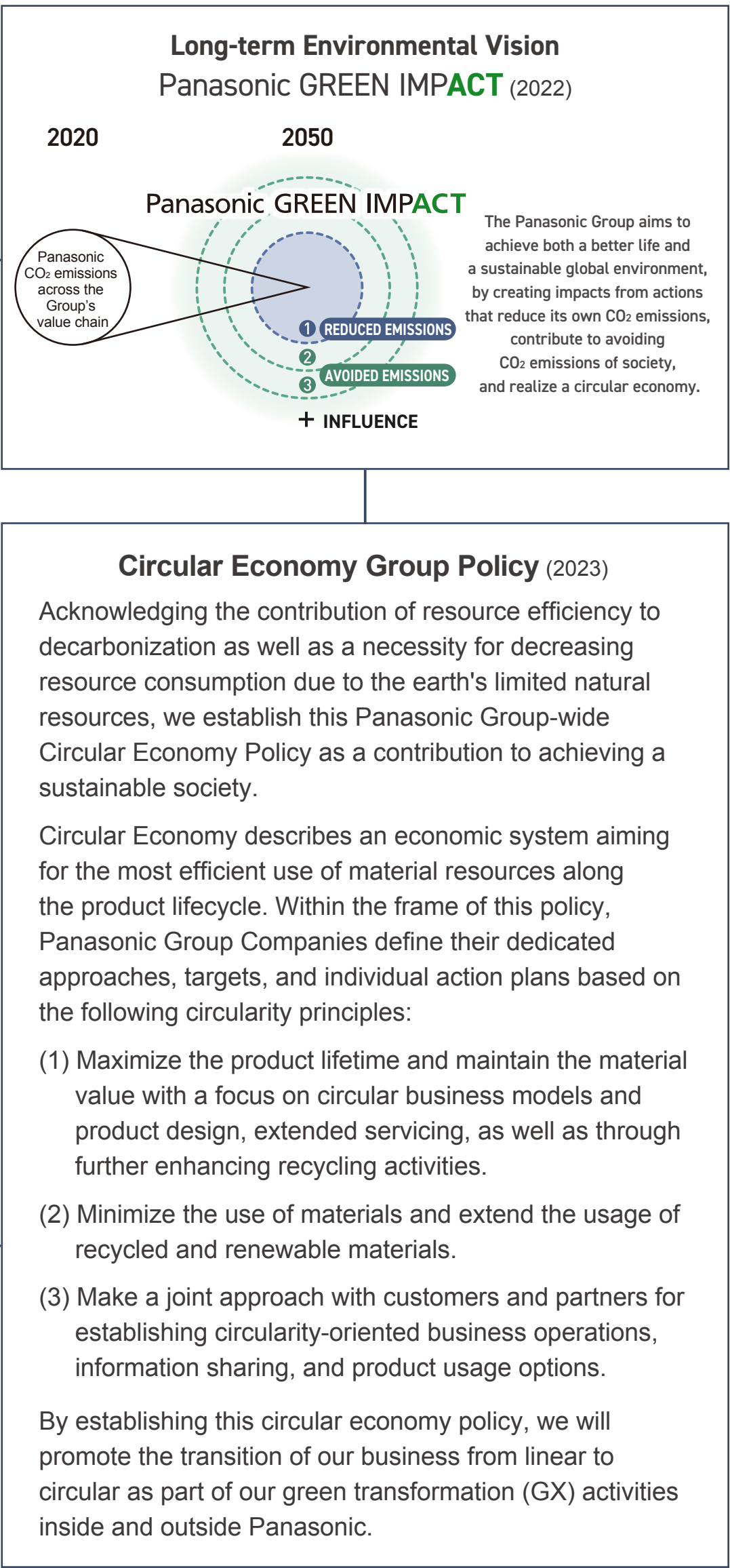
We also established our Circular Economy Group Policy in 2023, in addition to our decarbonization efforts, as the principle of our priority activities that aim at the most efficient use of material resources.



- Environmental Control Policy (1991)**
- (1) Applied by all business sites worldwide
 - (2) Original text in English (Japanese text is a translated version)
 - (3) There are punitive clauses



Towards achieving Panasonic GREEN IMPACT, the Panasonic Group establishes the GREEN IMPACT PLAN, a medium- to long-term environmental action plan. This plan specifies the KPIs for priority environmental issues and their targets, and also includes business materiality indices. Together with targets for decarbonization by fiscal 2031, we are currently working under GREEN IMPACT PLAN 2028, which covers the fiscal 2027 to 2029 KPIs in coordination with our business strategy (page 16).



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The Panasonic Group positions contribution to solving issues related to the global environment as one of business materiality.*¹ Two issues of particular urgency are climate change and resource exhaustion. Therefore, we believe it is indispensable to build a carbon neutral (CN) society*² by limiting the temperature rise to 1.5°C by 2050 and shifting to a circular economy (CE),*³ which is a resource-recycling economic system.

To commit to achieve these goals as a responsible company, and to accelerate our contribution to society and to our customers, we announced Panasonic GREEN IMPACT (PGI), our group-wide long-term environmental vision, in January 2022.

PGI is a strategy to address the social issues of climate change alleviation and resource recycling as an opportunity to improve our corporate value by reducing their risks, identifying opportunities to grow businesses and generate income, and strengthen our capital market reputation. PGI is designed to deliver both “better lives” and “a sustainable society” through our business activities. By accumulating each effort (ACT) made by the group, we aim at early resolution of environmental issues, such as climate change and resource exhaustion.

*1 Priority issues to create value for society through business activities (page 7).

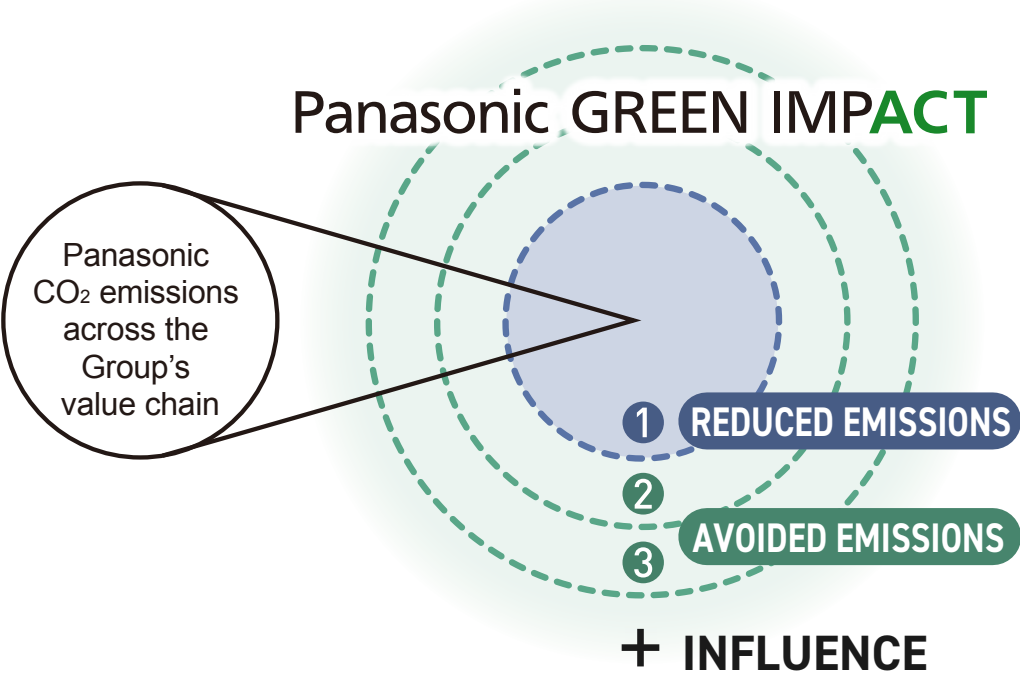
*2 Achieving net-zero emissions of GHG gases (including CO₂) by balancing emissions and absorptions.

*3 An economic system that preserves and maintains the values of products, materials, and resources for as long as possible to minimize waste generation.

Toward achieving carbon neutrality

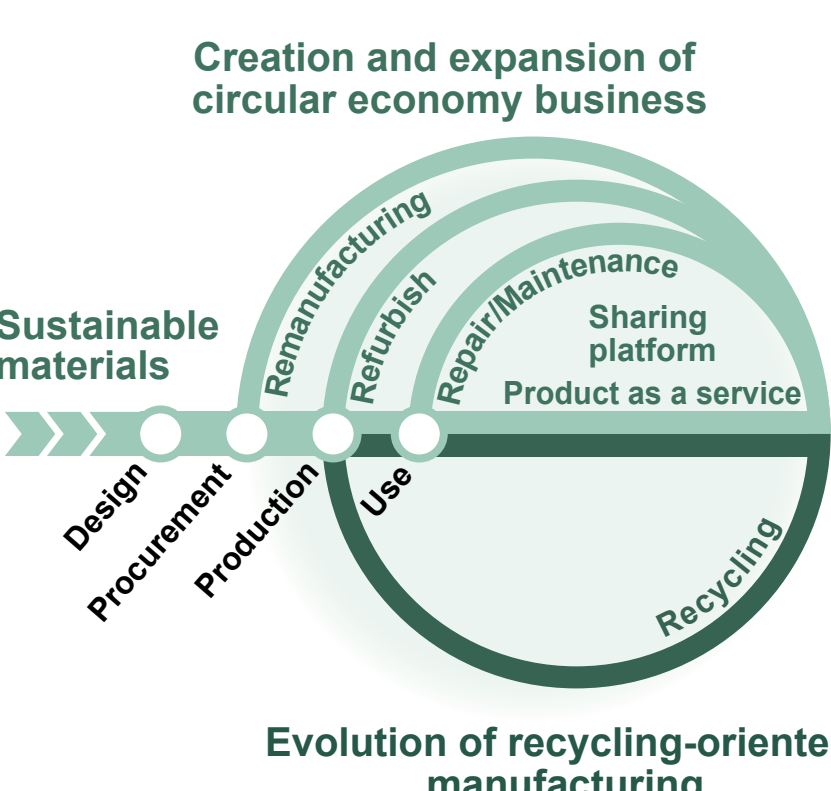
By 2050, we aim at reducing our CO₂ emissions by at least 300 million tons per year, which is equivalent to 1% of current global CO₂ emissions.

2020 Goal (2050)



Toward achieving a circular economy

The concept of a circular economy toward a sustainable society (4 5 6)



Converting CO₂ Reduction Impact into Business Growth, Financial Value, and Corporate Value

【2050 Goal】

By 2050, we aim to create a CO₂ reduction impact of 300 million tons or more per year,*⁴ through exercising our duty and influence throughout the value chain (1 OWN IMPACT), contributing to society and customers (2 CONTRIBUTION IMPACT), expanding such contribution (3 FUTURE IMPACT), and spreading their effect throughout society (INFLUENCE). The results should then be converted to our financial and corporate values.

*4 300 million tons is equivalent to approximately 1% of global CO₂ emissions (31.7 billion tons) in 2020.

1 OWN IMPACT: Reduced CO₂ emissions compared with CO₂ emissions from the entire value chain (VC) in 2020.

We aim to achieve net zero CO₂ emissions within our own value chain*⁵, along with the effect of the broader decarbonization of society*⁶ OWN IMPACT shows the “impact from CO₂ emissions reduction” by comparing the difference between the CO₂ emissions of the current year and those in 2020.

*5 Total of CO₂ emissions from our business activities (Scopes 1 to 3) including emissions from our operating companies (Scopes 1 and 2), emissions from manufacturing components and materials (Scope 3, Category 1), and emissions in product use (Scope 3, Category 11) (see page 17 for details)

*6 Improvement in CO₂ emissions factor for electricity by respective electric power suppliers.

2 CONTRIBUTION IMPACT: Avoided CO₂ emissions in present business fields*⁷

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

3 FUTURE IMPACT: Avoided CO₂ emissions by creating new technologies and businesses*⁷

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

*7 Amount of our contribution as CO₂ emissions reduction to society and customers through using our products and services (see page 18 for details).

+ INFLUENCE: Positive ripple effect of energy reform and decarbonization of society

We provide a positive influence on society by changing the behavior (ACT) of a wider range of people through the Panasonic Group's products, services, and social communications. (Initiatives to raise awareness of and enhance the recognition of avoided emissions (page 25), [free publication of patents](#), [corporate citizenship activities](#), [environmental education](#), etc.)

Creation and Expansion of Economically Rational CE Business

In 2023, we announced the CE Group Policy (page 14) in order to set out the maintenance and improvement of the value generated by resources as the foundation of our business operations. Based on this policy, we will identify the issues in shifting to CE-oriented business according to the characteristics of individual businesses. By working around such issues we can further the creation and implementation of our business strategies and action plans.

- 4 Maximize the product lifetime and maintain the material value with a focus on circular business models and product design, extended servicing, as well as through further enhancing recycling activities.
- 5 Minimize the use of materials and extend the usage of recycled and renewable materials.
- 6 Make a joint approach with customers and partners for establishing circularity-oriented business operations, information sharing, and product usage options.

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■ Status of GREEN IMPACT PLAN (GIP) 2024+ 1

To contribute to resolving global environmental issues (Panasonic GREEN IMPACT, [page 15](#)), the Panasonic Group established and is driving forward its environmental action plan, setting out Environmental KPIs—clear targets to address priority issues.

Our environmental action plan commenced as Green Plan 2010 announced in 2001, and evolved into Green Plan 2018 announced in 2010, then to Green Plan 2021 in 2018. These plans were formulated focusing on climate change alleviation and resource recycling to integrate environmental consideration with business management. The plan has been adapted according to changes in medium- to long-term management policies and business portfolios, taking account of the relationships between social issues and our respective businesses. Social movements, such as the Paris Agreement in 2015, have also been reflected in the plan.

Along with the announcement of PGI in 2022, we also formulated GREEN IMPACT PLAN (GIP) 2024, which is linked to the medium- to long-term business strategy to reinforce our environmental engagement. In fiscal 2026, we commenced GIP 2024+1, a single year target that was extended from GIP 2024, to prepare for the group-wide growth strategy to begin in fiscal 2027, along with structural reform of the group management. With GIP 2024+1, we achieved the OWN IMPACT targets thanks to the steady increase in net zero factories^{*1} toward the 2030 targets in the CO₂/Energy area, as well as the accelerated spread of LED lighting and expanded usage of natural refrigerants in ventilation and aircon equipment were also contributors to reducing emissions from customers using our products.

From an overall perspective, we also achieved the CONTRIBUTION IMPACT targets. However, efforts in the Resource/Circular Economy (CE) area are still working toward their targets in each business.

^{*1} Sites that have achieved our definition of “net zero” when energy-derived CO₂ emissions from our business activities (at factories and offices) are combined with energy saving, renewable energy use, purchase of renewable energy electricity certificates and carbon credits.

GREEN IMPACT PLAN 2024+1 (FY2026 Targets, Results, and Evaluation Points)

Note: This article refers to Priority Issues only.

Environmental KPI (Priority issues) ☆ Business materiality KPI			GREEN IMPACT PLAN 2024 + 1 (FY2026)		Evaluation Points
			Targets	Results	
CO ₂ / Energy	OWN IMPACT ☆ CO ₂ emissions reduction in our own Value Chain ^{*2}		▲ 40.12 Mt ^{*6} (17.01 Mt)	▲ 32.96 Mt (27.45 Mt)	[Supplement] The difference between 107.51 million tons in fiscal 2021 CO ₂ emissions and 140.47 million tons in fiscal 2026 emissions. The value in brackets () refers to the difference between 167.92 million tons in the fiscal 2021 emissions that newly included refrigerants, motors, etc., and the fiscal 2026 emissions. • Of 297 sites, 20% achieved net zero CO ₂ emissions. • Each site will increase investment and further refine activities for faster target achievement. • The Green Energy Certificate criteria in China was changed in November 2025. ^{*7} The number of sites (60) was determined using the criteria before this change. • Emissions were 109 million tons. The major reduction contributors (compared to FY2021) were lighting, fans, refrigerants (leaked volume), FA servo motors, etc. • The top three products produced 60% of avoided emissions. - First: Lithium-ion EV batteries - Second: DC fan motors for ventilation systems - Third: Back up batteries for data centers • Three new products: Energy-saving effect from insulated interior windows, increased power generation from solar panels made with fine tungsten wires, and reduced replacement frequency for alkaline batteries compared to manganese batteries due to their longer lifespan.
	Scopes 1&2 ^{*3}	Net zero sites ☆	Total 49 factories ^{*7}	Total 60 factories	
		CO ₂ reductions	0.81 Mt	0.96 Mt	
	Scope 3 ^{*3} (Category 11)	CO ₂ reductions during use of our products by customers	16.11 Mt	30.67 Mt	
	CONTRIBUTION IMPACT ☆ Avoided CO ₂ Emissions for society ^{*4}		47.50 Mt	48.46 Mt	
Resources/ CE*	Recycled resin used ^{*5} (Fiscal 2023 to 2025 total for GIP2024 targets) ^{*5}		25,000 tons	17,100 tons	• Despite successful new employment and business creation, they caused an insufficient short-term economic rationality and therefore the targets were not met.
	Circular economy business models and products (Total) ☆		Total 16 businesses	Total 15 businesses	

^{*2} Amount obtained by subtracting the amount of emissions in the relevant fiscal year from the amount of emissions in fiscal 2021. ^{*3} Classification according to the GHG Protocol (Accounting and Reporting Principles). ^{*4} Amount calculated by subtracting the lifetime CO₂ emissions after introduction from the lifetime CO₂ emissions assuming that the Group's products and services do not exist (see [page 18](#) for details). ^{*5} Mass of recycled materials contained in the recycled resin used in our products. ^{*6} Minus sign (-) means increasing emissions. Including increases or decreases in Scope 1,2 and Scope 3 Category 11, Category 1 (procurement), Category 12 (disposal), and other indirect emissions. ^{*7} Based on the Implementation Rules for the Management of Renewable Energy Green Electricity Certificates (Trial) enforced in November 2025. It includes the revision of the Green Electricity Certificates rules in China. ^{*8} The figures is a comparison with fiscal 2021 results (starting point) reflecting the equivalent amount of emissions from the products whose calculations became available after 2021.

■ GIP 2028 and FY2031 targets

GIP 2028 sets out the Group targets to achieve by fiscal 2029 (including the renewed fiscal 2031 target for CO₂ reduction impact). GIP 2028 is linked with the new business growth strategy established after the Group management reforms that took place in fiscal 2026, covering new and expanded indices that can be corporate value drivers. The following are the main renewal points:

- OWN IMPACT in fiscal 2031 will be estimated to be 5.5 million tons despite the fiscal 2026 result being 27.45 million tons. This figure took account of two factors: firstly, the CO₂ emissions increase due to the spread of air conditioners and ventilators while reducing their emissions by improving energy-saving performance and lowering the GWP^{*1} of refrigerants; and, secondly, practical estimation of the slowing speed of improvement in electricity-related CO₂ emission factors in different regions across the world.
- To achieve net zero CO₂ emissions in all designated sites by fiscal 2031, we upgraded the former CO₂ reduction criteria to “net CO₂ reductions,” which utilize energy-saving schemes, renewable energy usage (self-power generation and PPA^{*2}), and purchase of renewable energy certificates.
- Avoided emissions for our customers and society^{*3} (CONTRIBUTION IMPACT) was set at 77 million tons to be achieved by fiscal 2031, based on the 48.46 million tons recorded in the fiscal 2026 results. These results will be mainly led by the achievements in the Device area; at the same time the portfolio making up the contribution areas set in the original PGI has changed.
- A new index was added to the CE area to expand recycled material applications. In addition to recycled resin, recycled steel (electric furnace steel) was added as a new index. We also plan to generate two new CE business models or products.

^{*1} Global Warming Potential: an indicator of the size of the global warming effect from a gas.

^{*2} Power Purchase Agreement: a purchase contract of renewable energy-sourced electricity.

^{*3} Amount calculated by subtracting the lifetime CO₂ emissions using the Group's products and services from the lifetime CO₂ emissions of not introducing the Group's products and services ([page 18](#)).

GREEN IMPACT PLAN 2028 (FY2029 Targets) and CO₂ Reduction Impact FY2031 Targets

Business materiality		Indicator ☆ Business materiality KPI		GREEN IMPACT PLAN 2028 FY2027 TargetsFY2029 Targets		FY2031 Targets
Contribution to solving global environment issues	Contribution to carbon neutrality (CN)	CO ₂ reduction impact	300 million tons (PGI ¹⁴ target by 2050) ☆	—	—	—
			OWN IMPACT ☆ CO ₂ emissions reduction in our own Value Chain ⁵	21.00 Mt	16.00 Mt ☆	5.5 Mt
			CONTRIBUTION IMPACT ☆ Avoided CO ₂ Emissions for society ³	59.00 Mt	71.00 Mt ☆	77.00 Mt
		CO ₂ emissions from all sites	Net zero sites ⁶ ☆	Total 64 sites	Total 86 sites ☆	All sites ⁸ ☆
			Net CO ₂ reduction in sites 	0.74 Mt	1.40 Mt	1.91 Mt
			Energy saving	0.034 Mt	0.25 Mt	0.28 Mt
	Promoting a Circular Economy (CE)	Recycled material used ⁵	Recycled resins ☆	17,000 tons	22,000 tons ☆	—
			Recycled steel (electric furnace steel) ¹⁰ ☆ 	1,500 tons	2,500 tons ☆	—
		Creation of new CE business models or products ¹¹ ☆		Total 15 businesses	Total 17 businesses ☆	—
	Initiatives relating to issues other than Business Materiality KPIs					
Nature Positive (NP) /water & biodiversity, etc.		Reducing the impact of business activities on the ecosystem and restoring it to a nature positive state.		Chemical substances	Reducing environmental loads of the chemicals used in our business activities and products	
		Procurement of sustainable raw materials, Green space of operating units that contribute to biodiversity, Products and services that contribute to biodiversity		Local communities	Promoting environmental initiatives to contribute to local communities and educating the next generation.	
		Reducing water consumption in business activities and products/services.		Compliance	Ensuring compliance with environmental laws and regulations.	
		Promoting water resources management in manufacturing sites in areas of high water risk		—	—	

^{*4} Panasonic GREEN IMPACT (see [page 15](#) for details). ^{*5} To ensure the Group's reduction efforts, the baseline FY2021 emissions were recalculated using products covered by the FY2027 plan. ^{*6} Sites that have achieved our definition of “net zero” when energy-derived CO₂ emissions from our business activities (at factories and offices) are combined with energy saving, renewable energy use, purchase of renewable energy electricity certificates and carbon credits. ^{*7} CO₂ emissions reduced by energy-saving schemes, renewable energy generation, and purchasing renewable energy certificates. ^{*8} 297 sites as of March 2026. ^{*9} The mass of recycled materials contained in the recycled resin used in the Group's products. The amount is calculated based on the information available to us, as some manufacturers have restrictions on disclosing their production information. ^{*10} The mass of electric furnace steel used in the Group's products. ^{*11} Among the CE businesses under our definition, the number of businesses that started a new service or product that offers novel recycling value.

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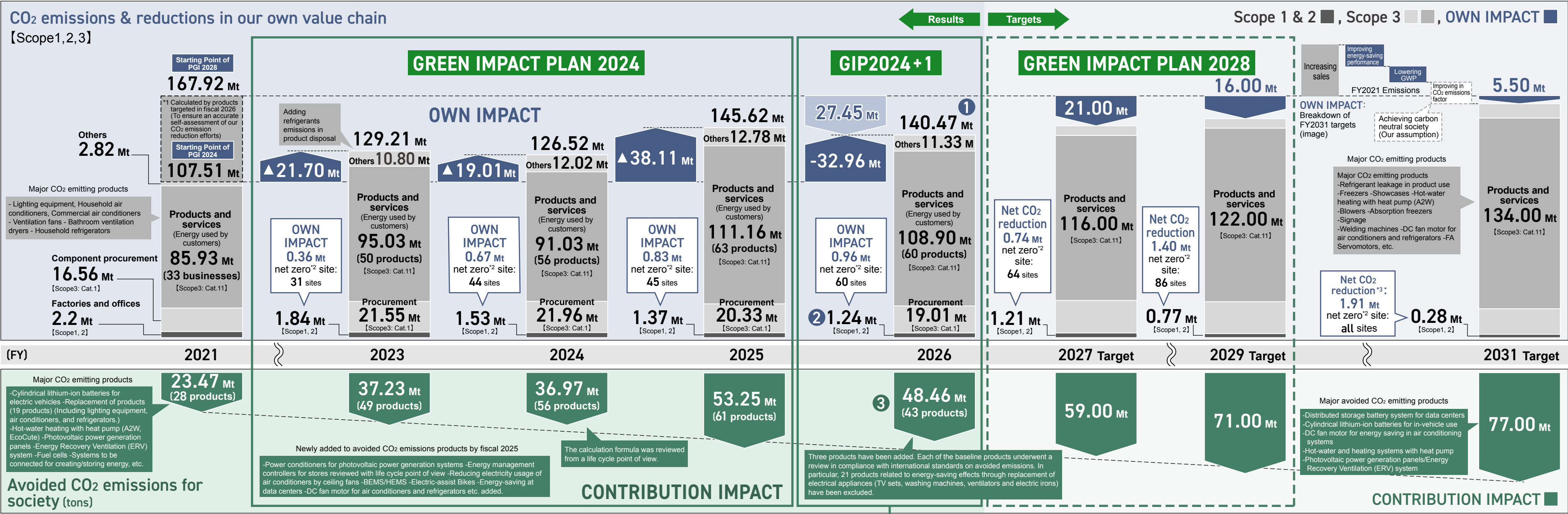
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The Status of Progress in CO2-related Indices to Fiscal 2026 and Breakdown of GIP 2028 and 2030 Targets



*1 Dotted area is estimated emissions due to the widening of responsible areas in line with the introduction of stricter laws and regulations and refinement of calculation since 2022, when PGI was established. Extended coverage of disclosure by laws and regulations (motors and refrigerants in use/ disposal), refinement of calculation (26 products such as freezers), business portfolio changes (Hussmann Corporation, etc.) and new business growth (A2W, etc.) *2 Sites that have achieved our definition of "net zero" when energy-derived CO₂ emissions from our business activities (at factories and offices) are combined with energy saving, renewable energy use, purchase of renewable energy electricity certificates and carbon credits. *3 CO₂ emissions reduced as a result of energy savings, renewable energy use and renewable energy electricity certificates.

(Unit : 10kt)

①

[CO₂ Emissions by Scope]

For details, refer to Environmental Data P. 48.

Scope 1,2,3 Subtotal						14,047	
Scope 1,2 Subtotal						124	
Scope 1: Direct emissions from facilities owned and controlled by the Panasonic Group						25	
Scope 2: Emissions from production of energy consumed at facilities owned and controlled by the Panasonic Group.						100	
Scope 3: *The numbers 1–15 at the beginning are category numbers. Categories 8, 13, and 14 are not covered.						13,923	
Procurement				Procurement		1,133	
1	Purchased goods and services		1,901		2	Capital goods	162
					3	Fuel- and energy-related activities	27
Products and services				4		Upstream transportation and distribution	78
11	Use of sold products		10,890		5	Waste generated in operations	0.1
		Energy-derived	10,301		6	Business travel	2.7
		Refrigerant leakage	590		7	Employee commuting	9.5
						9	Downstream transportation and distribution
				10		Processing of sold products	12
				12		End-of-life treatment of sold products (Refrigerant: 515, Others: 178)	693
				15		Investments	126

②[Environmental Preservation and Economic Effects of Sites]

We collect data on how our environmental impact (and controlled emissions) affects investments/expenditures and economic benefits. This data is utilized internally as basic information for our continuing environmental sustainability management.

Categories	Emission reduction			Investments and expenses	Economic benefit ⁴
	Reference indicator: environmental impact				
	FY2025	FY2026			
CO ₂ emissions from production activities	130 kt	1.24 Mt	1.11 Mt	Investments ^{*2} 4,711 million yen	303 million yen
Human Environmental Impact	▲101 k count	339 k count	440 k count		
Landfill of waste	▲0.1 kt	1.9 kt	2.0 kt	Expenses ^{*3} 51 million yen	
Water withdrawal	40,000 m ³	13.49 Mm ³	13.45 Mm ³		

*1 Energy-based CO₂ emissions under Scope 1 + Scope 2 - carbon credit amount (differs from subtotal of Scopes 1 and 2)
*2 Includes all investments relating to environmental conservation. The difference or appropriate portions (divided proportionally) are not calculated.
*3 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.
*4 The economic benefit represents the cost of energy savings achieved through energy conservation, which translates into cost reductions that contribute to climate change mitigation.

③[Environmental and Economic Effects for Customers]

Electricity reduction at customers (during product use)	
Reduced amount of electricity ^{*5}	76.1 TWh
Reduced electricity costs ^{*6}	2,277.4 billion yen

*5 Calculated under the same conditions as CONTRIBUTION IMPACT (Avoided CO₂ emissions); however, contribution of electrification was excluded.
*6 Electricity costs were set for each region based on our investigation.

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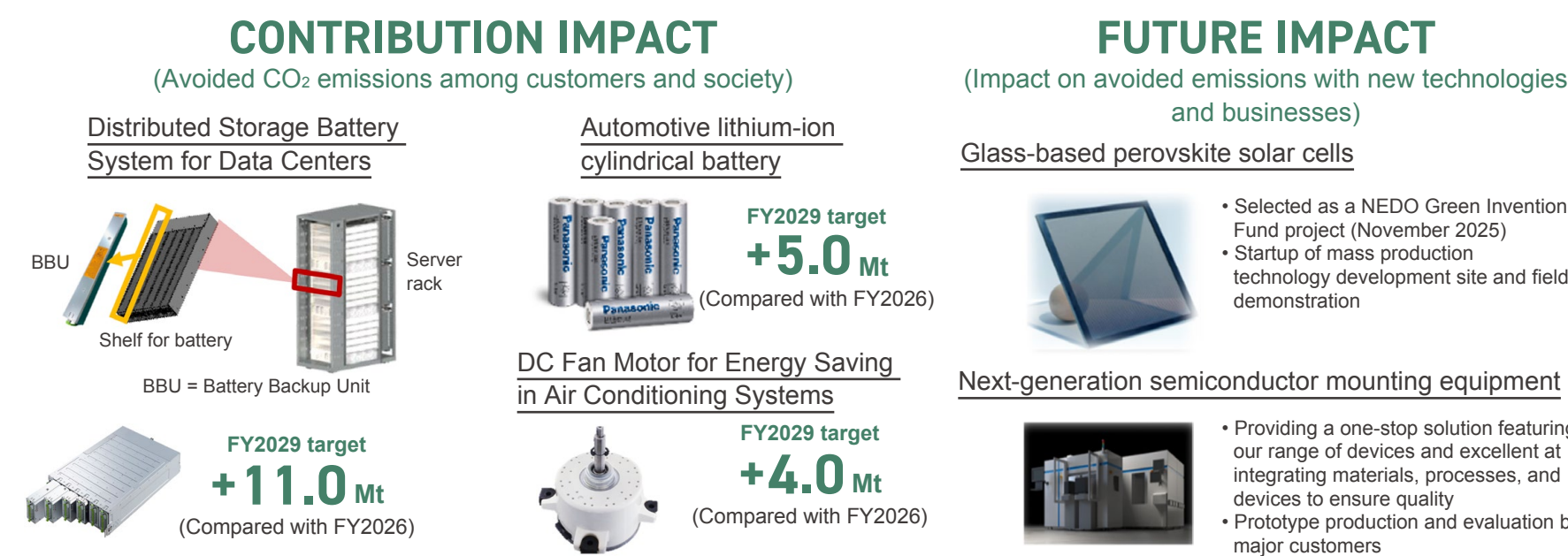
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■ Simultaneous increase in avoided CO₂ emissions and business opportunities in growth areas, converted to financial and corporate values

Avoided CO₂ emissions (“avoided emissions”) is a leading indicator of growth calculated by converting the volume of electricity and fuel consumption that is made efficient by the introduction of new technologies and products and services (“products”) to show quantitatively the reduction in CO₂ emissions provided to customers and society. Internationally, the term “avoided emissions” represents an approach to determine the volume of emissions that would have been released if the product had not introduced, thus defining the product’s positive impact on climate change. The increase in avoided emissions from our existing businesses (CONTRIBUTION IMPACT) and from new technologies expected to generate new business (FUTURE IMPACT) signify a rise in our competitiveness and business opportunities in growth markets.

In CONTRIBUTION IMPACT, our contribution to CO₂ reduction is being propelled in our Devices business by products such as lithium-ion batteries (used in electric vehicles^{*1}, storage battery systems for data centers^{*2}, etc.) and DC motors^{*3} (used in air conditioning systems, etc.), increasing from 48.46 million tons in fiscal 2026 to 71 million tons in fiscal 2029 and further to 77 million tons in fiscal 2031.

In FUTURE IMPACT, expected to accelerate the rise in avoided emission in the future (impact of new technologies and businesses that emerged after announcement of PGI in 2022), we are making advances in renewable energy use in urban areas by the use of building-integrated Perovskite photovoltaics glass. In next-generation semiconductor mounting equipment, we are involved in the development and future implementation of technology that achieves both advanced semiconductor performance and energy-saving with the 3D stacking process.



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Solution Field

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

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

Main product life stages subject to avoided CO2 emissions



Sales regions: Japan for EcoCute, and Europe for A2W

Product overview:

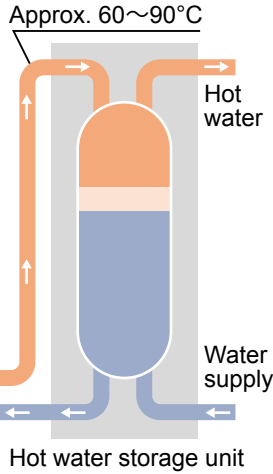
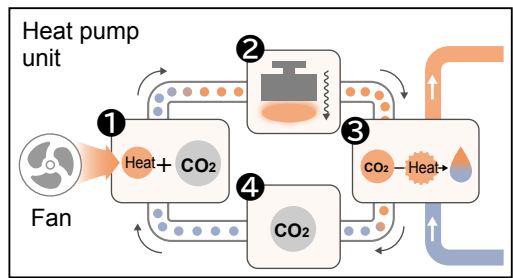
A heat pump (HP) hot-water and heating system supplies hot water and heats rooms. The system extracts ambient heat from the air by an electric fan and transfers it into a natural refrigerant (CO₂). Next, it compresses the refrigerant in an electric compressor to heat it, and the refrigerant's heat is exchanged with the water. The heated water can then be used for hot water and for room heating. To obtain the same amount of heat, electric HPs have 2.4 to 4.3 times^{*2} better energy efficiency than conventional fossil fuel combustion systems using city gas.

^{*2} Our own calculation based on information^{*3} in METI's 'Top Runner Program'.
^{*3} METI's Top Runner Program for Gas Water Heaters https://www.enecho.meti.go.jp/category/saving_and_new/saving/enterprise/equipment/toprunner/14_gasonisui.html (In Japanese)

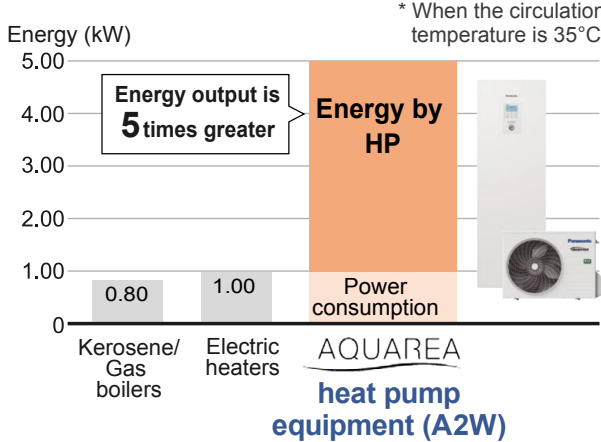
Avoided CO2 emissions mechanism:

Avoided emissions are the difference between the direct CO₂ emissions from fuel combustion in a gas system and the indirect CO₂ emissions (calculated from the amount of power consumed in an electric HP system) over their lifetimes (10 years).

How EcoCute works



Comparison: Energy output per 1kW power consumption



[Know Your EcoCute! \(in Japanese\) | EcoCute | Hot water & Heater | Panasonic](#)

Baseline scenario: (Simulation without this product)

Gas water heater would remain in use in Japan, and gas boilers/heaters would remain in use in Europe until the end of product life (assumption).

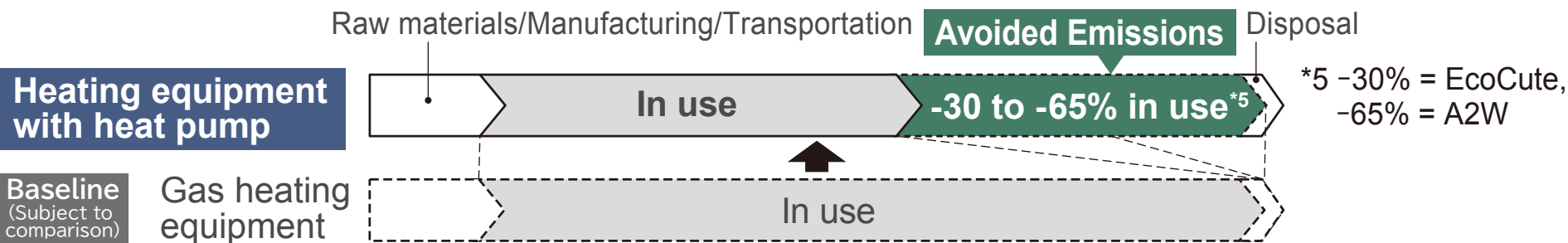
Baseline: (Subject to comparison)

(EQ) CO₂ emissions^{*3} of a standard gas water heater on the market (A2W) CO₂ emissions from existing gas water heater/heaters

Coverage of quantification: (System boundary)

The difference in the CFPs^{*} for both the HP system and the gas system. The HP system also showed less CO₂ emissions when not in use; however, the difference between the CO₂ emissions from the HP system and the gas system when not in use is smaller than the difference when in use.^{*4} We decided not to add the non-use difference to the avoided emissions to retain a conservative viewpoint in quantification.

^{*4} 1 to 3% of the avoided emissions (actual results for Panasonic in FY2026)



Calculation formula:

$$\begin{aligned} & \text{[Amount of activities] (Units)} \times \text{The replacement rate from existing gas heating equipment} \\ & \times \left(\begin{aligned} & \text{Annual city gas consumption per gas heating equipment (m}^3\text{)} \times \text{City gas CO}_2\text{ emission factor (kg CO}_2\text{/m}^3\text{)} \\ & - \text{Annual power consumption per unit of the heating equipment with heat pump (kWh)} \times \text{Electric power CO}_2\text{ emission factor per sales region (kg CO}_2\text{/kWh)} \end{aligned} \right) \times \text{Period (Ten years)} \\ & \text{Annual avoided emissions by one heating equipment with heat pump replacing a gas heating equipment.} \end{aligned}$$

- Electric power CO₂ emission factor: Japan 0.449 kg/kWh, and Europe 0.254 kg/kWh (Source: IEA 2025)
- City gas CO₂ emission factor: 2.05 kg/m³ Data from the Ministry of the Environment used globally.

Amount of activities: (Regional sales unit per product group)

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.

^{*6} Our own calculation based on data from the Japan Refrigeration and Air Conditioning Industry Association (JRAIA).

A2W: The number of annual sales of A2W in Europe (Unit)^{*7}

^{*7} We deemed that replacement ratio of old A2Ws with new ones can be ignored as the sales started in 2008.

Period: (Flow method: Include entire lifetime CO₂ emissions of the product in its first sales year) 10 years (The holding years of repair parts.) CO₂ emissions reduction effect continues during that period. (Assumption)

Fiscal 2026 avoided emissions: 2 million tons

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

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Electrification

Device Field

Cylindrical Lithium-ion Batteries for In-vehicle Use

Main product life stages subject to avoided CO₂ emissions



Sales regions: North America

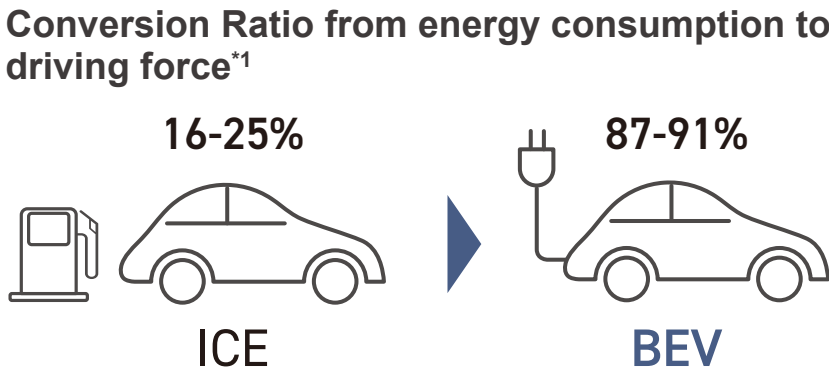
Product overview:

Compared with Internal Combustion Engine (ICE) vehicles, Electric Vehicles (EVs) have better energy efficiency*¹ and lower CO₂ emissions throughout their lifecycles. Among EVs, Battery Electric Vehicles (BEVs) are propelled by all-electric motor rotation. The batteries used in BEVs are regarded as one of their most important components as they are equivalent to the fuel supply in ICE vehicles.

*1 [Electrifying transportation reduces emissions AND saves massive amounts of energy](#) » Yale Climate Connections

Avoided CO₂ emissions mechanism:

By running a BEV with Panasonic rechargeable batteries and an ICE vehicle over the same distance, calculate the CO₂ emissions equivalent to the power consumed by the BEV and the CO₂ emissions from fuel combustion in the ICE. When comparing these CO₂ emissions, there would be a difference because the BEV has better energy conversion efficiency.



Baseline scenario: (Simulation without this product)

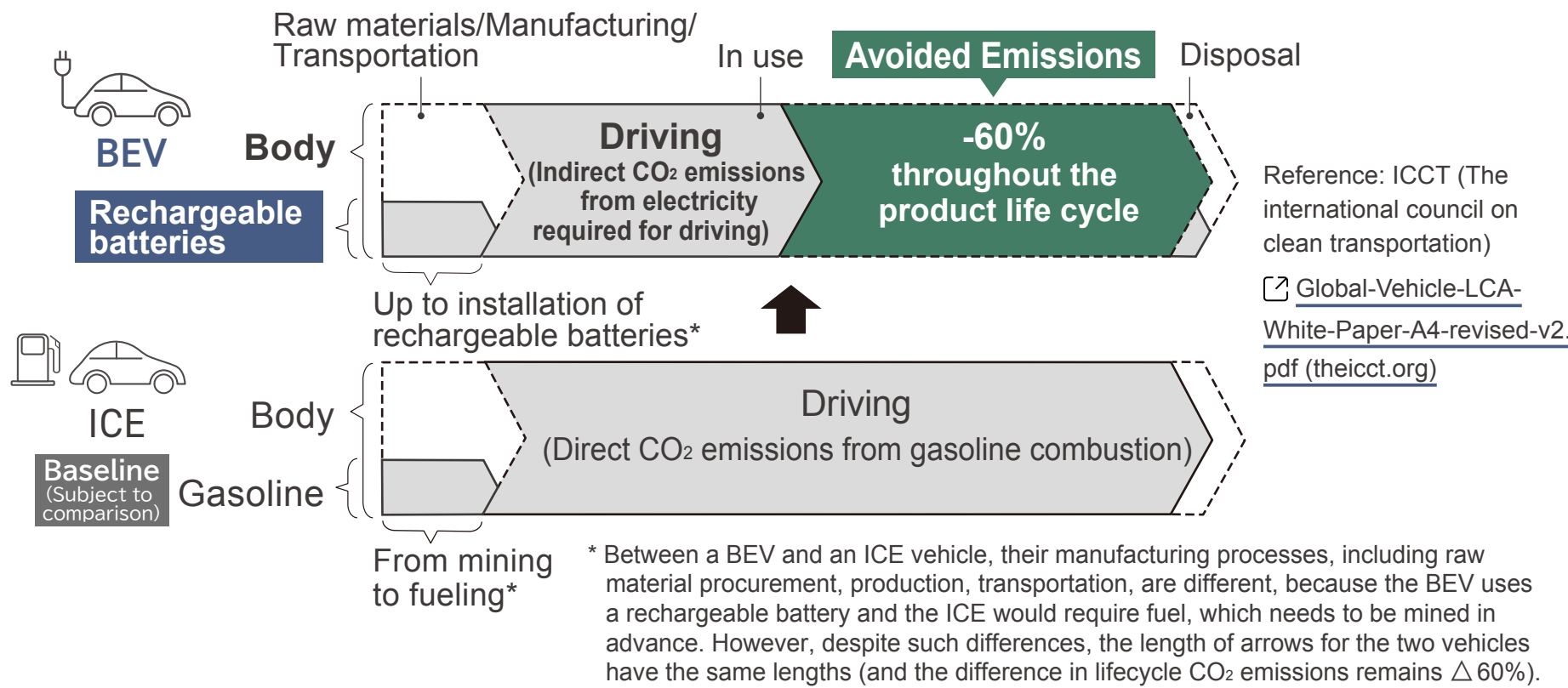
An assumption based on an average ICE vehicle in the U.S. used over its deemed lifetime mileage

Baseline: (Subject to comparison)

CO₂ emissions from an average ICE vehicle in the U.S. over its entire product lifecycle, including fuel production and usage.

Coverage of quantification: (System boundary)

The difference between the total CO₂ emissions from the BEV and the ICE vehicle. The total CO₂ emissions cover the entire lifecycle of the respective vehicles, from the stage of raw material mining to disposal and recycling, including usage over the same lifetime mileage.



Calculation formula:

$$\left(\frac{\text{Amount of activities}}{\text{Avoided emissions for a given amount of activities}} \times \frac{\text{CO}_2 \text{ emissions-related values and factors}}{\text{Period}} \right) \times \text{Lifetime mileage}$$

[Amount of activities] (Units)
The CO₂ emissions converted from the number of BEVs of the battery capacity sold per year

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

CO₂ emissions for an ICEV throughout the entire product life cycle*² (kg-CO₂/km)

CO₂ emissions for a BEV throughout the entire product life cycle*² (kg-CO₂/km)

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

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

Amount of activities: (Unit)

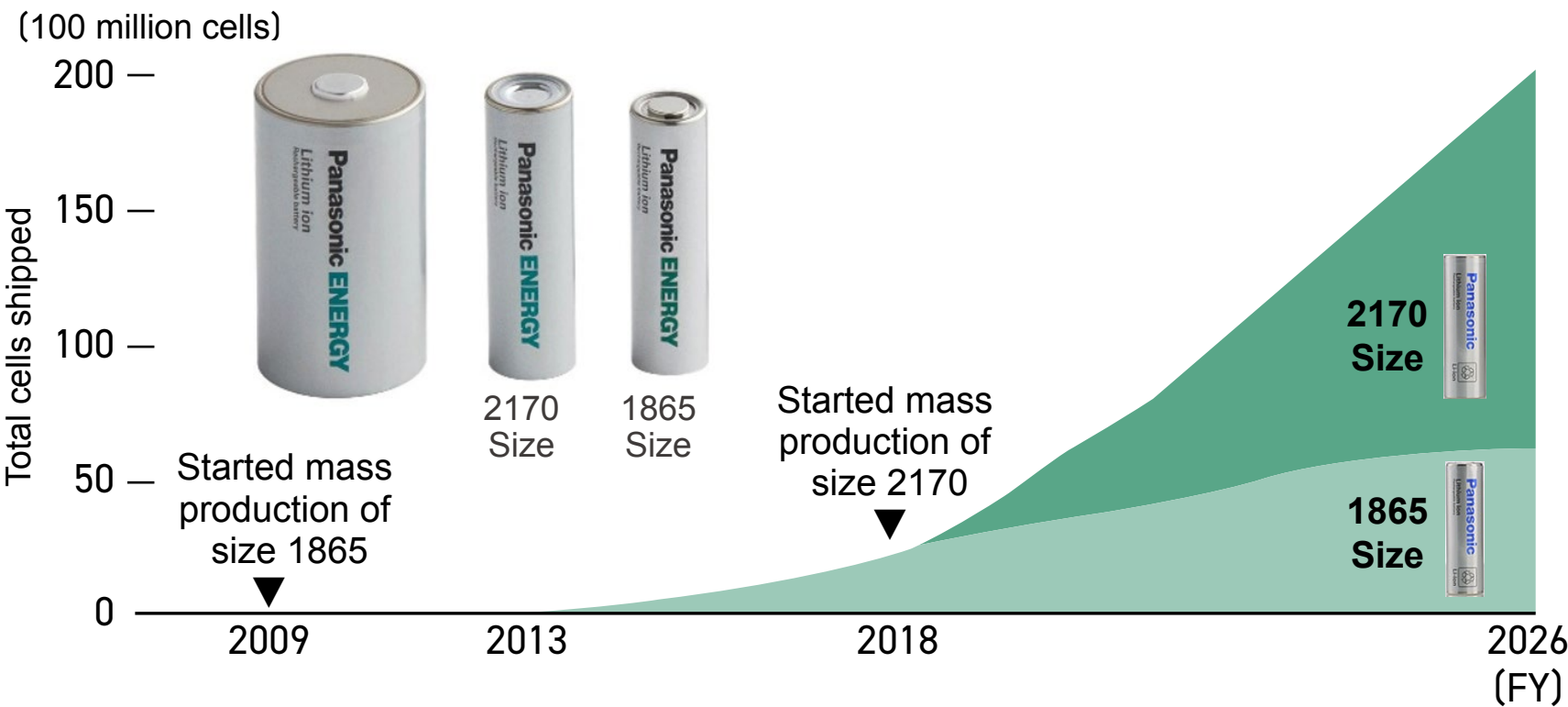
CO₂ emissions converted from the number of sold cylindrical lithium-ion batteries for in-vehicle use per year to the number of BEVs.

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

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

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

The Shipping Quantity of Cylindrical Lithium-Ion Batteries for In-Vehicle Use



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Energy Saving

Device Field

DC* Fan Motor for Energy Saving in Air Conditioning Systems

* Direct Current (DC)

Main product life stages subject to avoided CO₂ emissions



Sales regions: China, Southeast Asia, Europe, North America

Product overview:

The fan motor is an indispensable component that determines the performance of an air conditioner. Although the motor's power consumption is less than 10% of that of the entire air conditioner, the fan motor saves energy over its lifetime while being used by a customer, and directly contributes on CO₂ emissions reduction. Compared to an Alternating Current (AC) motor, a Direct Current (DC) motor can be operated optimally for a given load, thereby consuming energy more efficiently.

Avoided CO₂ emissions mechanism:

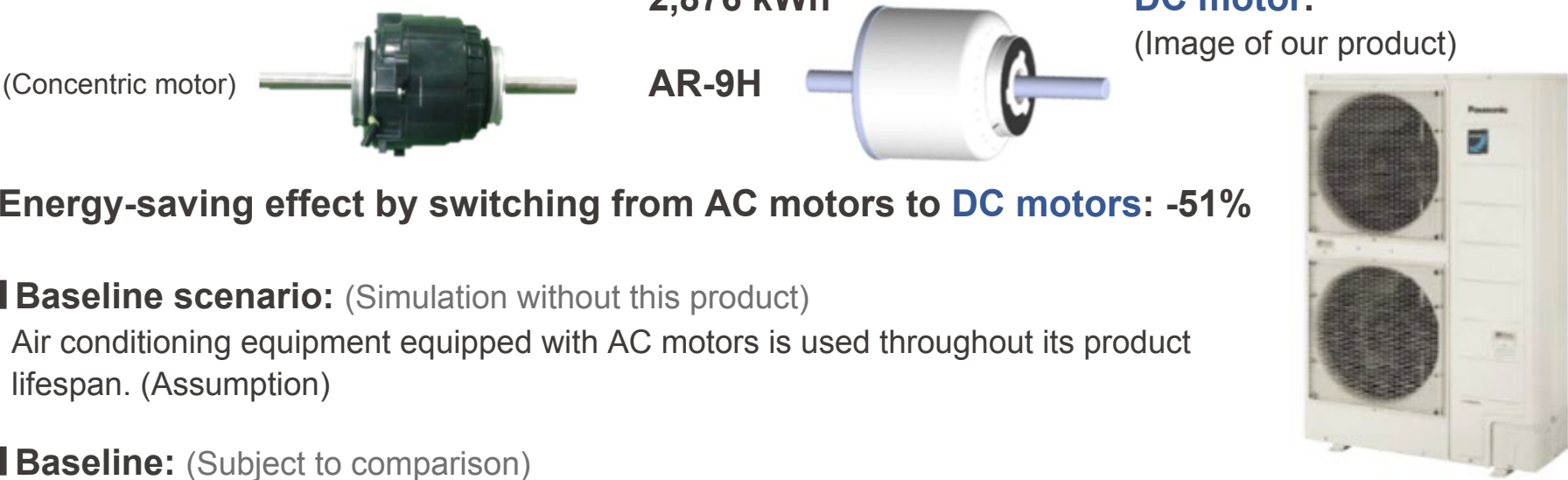
The difference between converted CO₂ emissions equivalent to the power consumption of an AC motor and a DC motor are the avoided emissions.

Example

Annual power consumption of AC motor 5,897 kWh

Annual power consumption of DC motor 2,876 kWh

Outdoor unit for a multi-split air conditioning system for buildings, equipped with a DC motor.



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

Baseline scenario: (Simulation without this product)

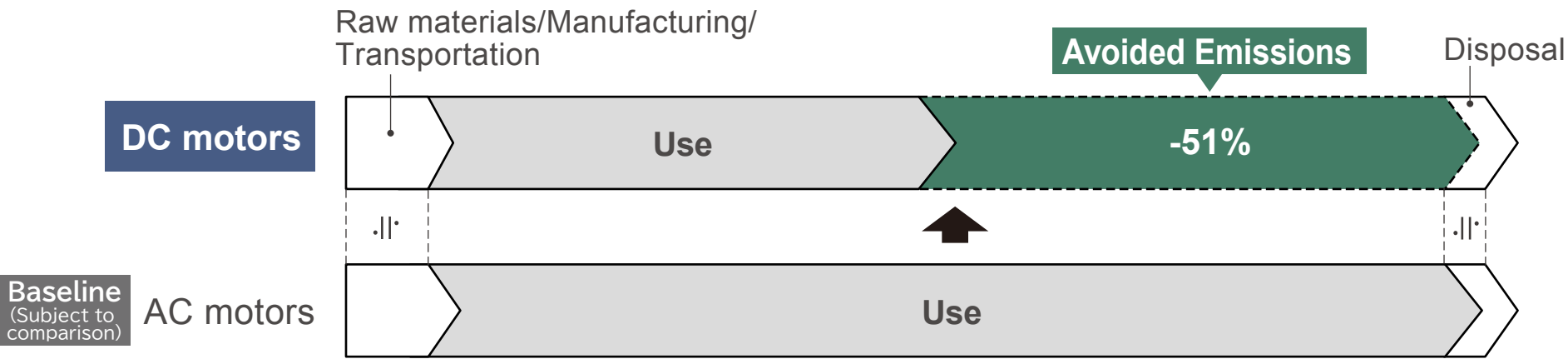
Air conditioning equipment equipped with AC motors is used throughout its product lifespan. (Assumption)

Baseline: (Subject to comparison)

Lifetime CO₂ emissions from an AC motor that drives the fan in an air conditioner

Coverage of quantification: (System boundary)

The difference between CFPs* of an AC motor and a DC motor. The CFP difference when not using the two motors was excluded from the data by our decision. This was because the average 80 to 90% CFP from an electric appliance, including the motor, is derived from its usage, and the CFPs of the two motors when not in use are equivalent.



Calculation formula:

Amount of activities (Number of units) × AC motor penetration rate per sales region × (Annual power consumption of AC motors (kWh) - Annual power consumption of DC motors (kWh)) × CO₂ emission factor for electricity per sales region (kg CO₂ /kWh) × Period (9 years) = Annual avoided emissions from energy-saving effect by one replaced product

Amount of activities: (Unit)

Annual sales in each sales area (penetration rate, etc.), also taking account of the pre-DC motor period sales.

Period: (Flow method*)

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

* Include entire lifetime CO₂ emissions of the product in its first sales year

Fiscal 2026 avoided emissions: 8 million tons

CO₂ Emissions Factor from Electricity

(IEA2025)
Unit: kg/kWh

Region	Factor
Japan	0.449
Europe	0.254
North America	0.331
China	0.590
India	0.748
Southeast Asia	0.378
Central and South America	0.244
Middle East and Africa	0.597

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

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Reducing Heat Loss Solution Field

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



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

Product overview: Our heat exchange system exchanges the ambient heat between the interior and exterior air during ventilation. By either heating or cooling the exterior air using a heat exchange element before sending it into the interior, the system reduces the air conditioning load. The system is also equipped with an air purifier to maintain good air quality, and is thus capable of reducing heat loss in rooms while also delivering air purity. The system can be widely adopted in houses, shops, and buildings where high air tightness (insulation) is required across many countries, including Japan, China, the U.S. and Europe.

How ERV System works (winter)

Avoided CO₂ emissions mechanism: CO₂ emissions converted from the reduced amount of power or fuel consumption by adopting this ERV² System in room spaces under the same conditions compared to those from average ventilation method for ventilation in the market. *2 Energy Recovery Ventilation

Baseline scenario: (Simulation without this product) The use of air conditioners in a residential house where the current average ventilation systems in the market (Assumption)

Baseline: (Subject to comparison) CO₂ emissions converted from power and fuel consumption per each sales region from the use of air conditioners in a residential house where the current average ventilation systems in the market are installed.

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

CO₂ emissions equivalent to the amount of energy consumed by air conditioning system in a residential house with air conditioner installed using conventional ventilation techniques

CO₂ emissions equivalent to the amount of energy consumed by air conditioning system (heat loss) in a residential house with air conditioner installed using ERV System

Avoided Emissions Global average 3.7 ton/unit

CFP* of the equipment with conventional ventilation system 15.4 kg/unit

CFP* of the equipment with ERV System 194.4 kg/unit

CFP difference of equipment is ignored.

Heat Exchange System

Calculation formula:

Amount of activities, Avoided emissions for a given amount of activities, CO₂ 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) × CO₂ emission factors by electricity or fuel type in each sales region

Annual energy consumed by air conditioning in a residential house with a ERV System (volume of thermal loss) × CO₂ emission factors by electricity or fuel type in each sales region

Annual avoided emissions by installed one ERV System × Period

CO₂ emission factor for electricity: 0.449 kg/kWh in Japan, 0.590 kg/kWh in China, 0.331 kg/kWh in North America, and 0.254 kg/kWh in Europe (Source: IEA 2025)

CO₂ emission factor for kerosene: 2.49 kg/liter Data from the Ministry of the Environment used globally.

Amount of activities: (Unit) The number of annual sales of heat exchange units, which is the core function of the system.

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

Designed lifetime of ERV System (10 years)

CO₂ emissions reduction effect continues during the period.

Fiscal 2026 avoided emissions: 0.7 million tons

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

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Energy Saving
(+ Peak Shaving)

Device
Field

Distributed Storage Battery System for Data Centers

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



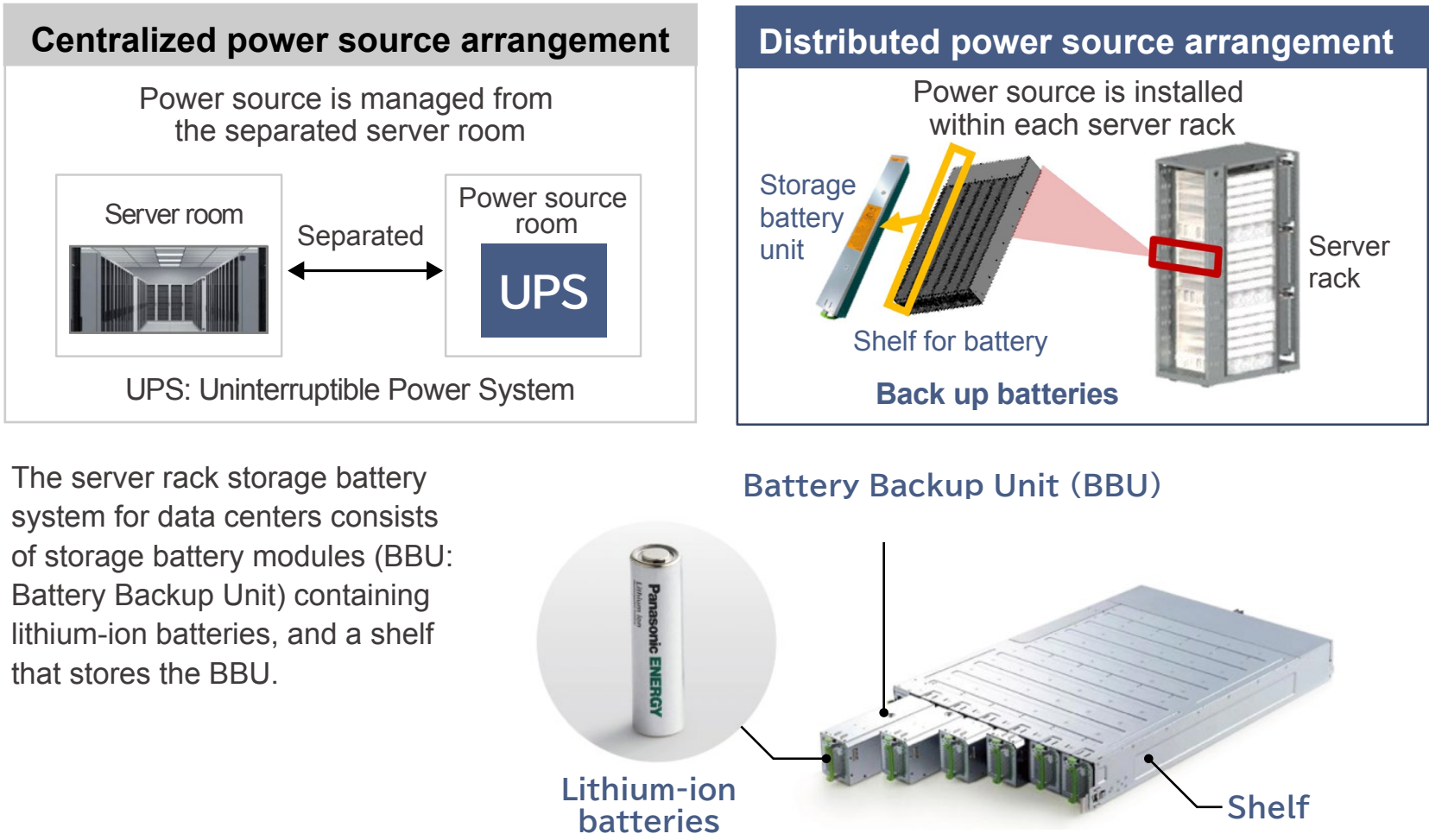
Product overview:

Electricity demand from data centers is rapidly increasing due to the spread of high-performance servers for AI use. Stabilizing power supply is now indispensable to reduce peak power demand and avoid momentary power outages. In our distributed power supply system using lithium-ion batteries, a power supply unit is located at each server rack. This is both space saving and also offers better power supply efficiency by reducing the number of voltage conversions to the servers compared with conventional lead-acid batteries.

Avoided CO₂ emissions mechanism:

The calculation assumed the same load of computing is operated in two data centers, one equipped with a distributed power supply system and the other with a central power supply system. The avoided emissions are equivalent to the reduced power consumption achieved by the voltage conversion loss reduction.

Wide ← Installation space → Narrow



Baseline scenario: (Simulation without this product)

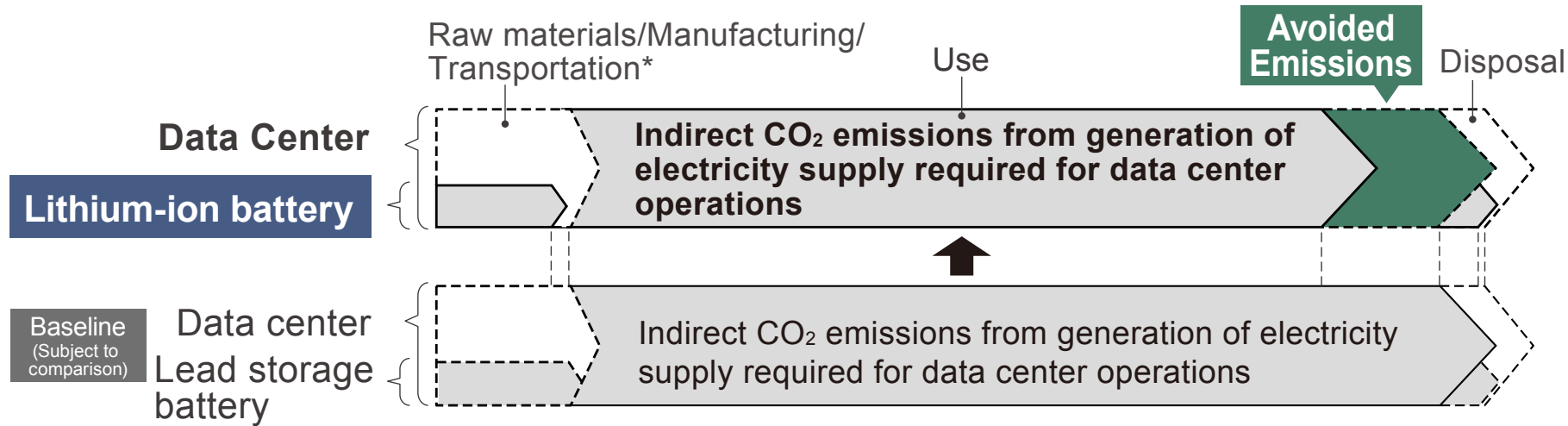
A data center with a central power supply system that operates a certain level of computing load.

Baseline: (Subject to comparison)

CO₂ emissions equivalent to the power consumption required for the data center with a central power system to operate the said level of computing load for a certain period.

Coverage of quantification: (System boundary)

Determine the power consumption required via the power supply systems for a data center to operate at a specified level of computing load. Then determine the difference in voltage conversion loss between the centralized power supply system with lead-acid batteries and the distributed power supply system with lithium-ion batteries. Calculate the CO₂ emissions equivalent to the loss difference.



* A lithium-ion battery's CFP (1.6 kg/kWh) is about 80% of a lead storage battery's CFP (2 kg/kWh). This difference was not included in the avoided emissions to retain a conservative viewpoint in quantification.
[Reference] LCAs of lithium-ion batteries and lead storage batteries <https://doi.org/10.1016/j.jclepro.2022.131999>

Calculation formula:

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

[Amount of activities] (Number of units)
The number of power storage battery system for DCs sold per year

× (Annual power consumption by centralized power source arrangement (MWh) — Annual power consumption by distributed power source arrangement (MWh))

× CO₂ emission factor for electricity in North America (0.331 ton- CO₂ /MWh) × Period

Annual avoided emissions from energy loss reduction by distributed power source arrangement

Amount of activities: (Unit)

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

Period:

(Flow method: Include entire lifetime CO₂ emissions of the product in its first sales of the year)
Designed product life. CO₂ emissions reduction effect continues during the period.

[Reference] About distributed storage battery system for data centers

https://holdings.panasonic/content/dam/holdings/jp/ja/corporate/investors/pdf/irday2025_ene_j.pdf (in Japanese)

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

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Electrification

Smart Life Field

Electrically-Assisted Bicycle

Main product life stages subject to avoided CO₂ emissions



Sales regions: Japan

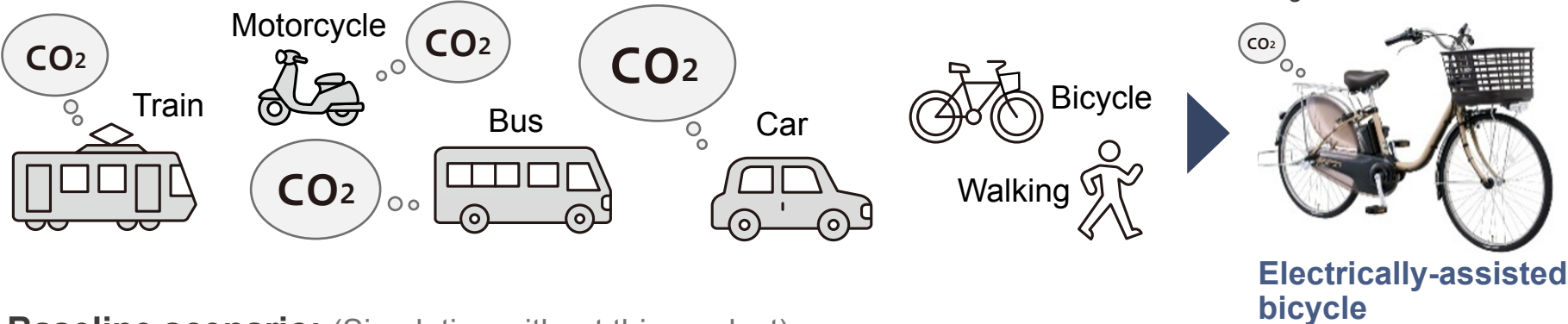
Product overview:

An electrically-assisted bicycle provides auxiliary power via a motor driven by pedaling. It is a means of transportation mainly achieved by human pedaling but with the help of a motor that reduces the physical burden of going uphill and carrying a load.

Avoided CO₂ emissions mechanism:

The difference between the CO₂ emissions equivalent of the electricity consumed by a train and the CO₂ emissions from the combustion of fossil fuels by a motorcycle, bus, or car—all moving the same distance—and the CO₂ emissions equivalent of the electricity consumed by an electrically-assisted bicycle is calculated as the avoided emissions. The CO₂ emitted by a bicycle and walking*1 are subtracted.

*1 CO₂ emissions from walking are deemed to be zero.



Baseline scenario: (Simulation without this product)

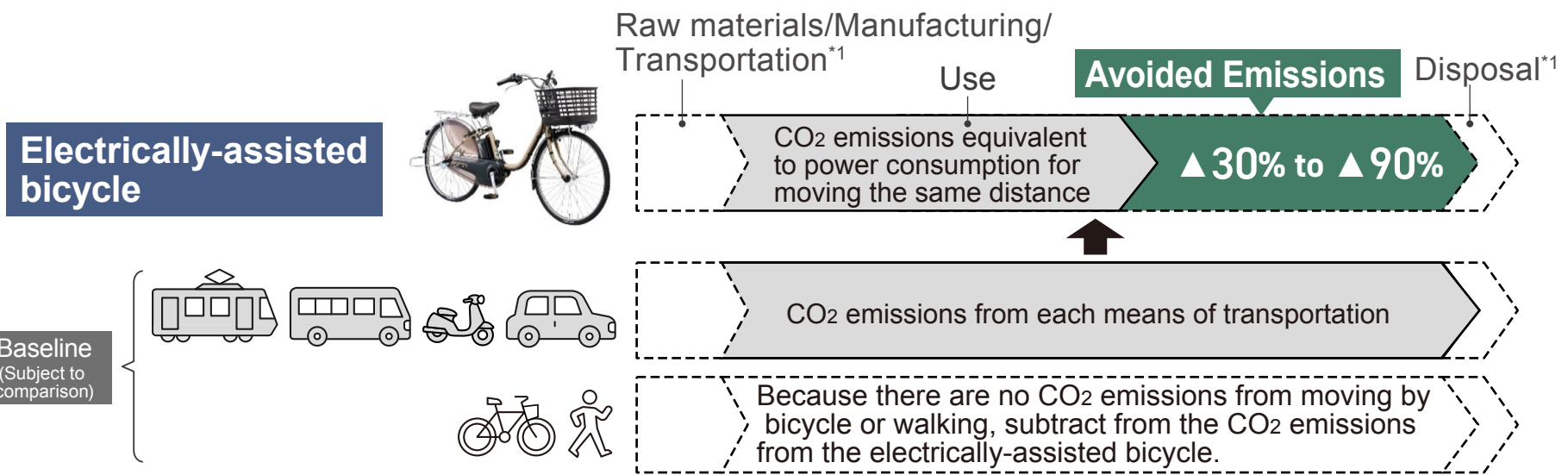
Means of transportation (train, motorcycle, bus, car, bicycle, and walking) that move the same distance as the electrically-assisted bicycle (Assumption)

Baseline: (Subject to comparison)

CO₂ emissions from moving the above distance by train, motorcycle, bus, and car (zero emissions from a bicycle and walking)

Coverage of quantification: (System boundary)

The difference between the CO₂ emissions from the average lifetime mileage of an electrically-assisted bicycle and that from a train, motor bike, bus, and car



*1 After analyzing the lifecycle CO₂ emissions of each means of transportation other than actual moving, these CO₂ emissions were excluded from the comparison due to the following reasons:

- CO₂ emissions from a bicycle and an electrically-assisted bicycle are equivalent, and CO₂ emissions from walking are impossible to calculate.
- The difference between the material volume used in an electrically-assisted bicycle and a train, bus, motor bike, or car is extremely large. Also, the difference between the lifetime mileages of an electrically-assisted bicycle and that of the other means of transportation is too large to compare.

Calculation formula:

Amount of activities	Avoided emissions for a given amount of activities	CO ₂ emissions-related values and factors	Replacement rate and period
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[Amount of activities] Annual sales (Unit)

$$\begin{aligned} & \times \left[\left(\begin{array}{l} \text{Annual CO}_2 \text{ emissions from train} \\ \text{moving per person}^{*2} \end{array} - \begin{array}{l} \text{Annual CO}_2 \text{ emissions} \\ \text{from an electrically-} \\ \text{assisted bicycle} \end{array} \right) \times \begin{array}{l} \text{Replacement} \\ \text{rate from} \\ \text{moving by train} \end{array} \right. \\ & + \left(\begin{array}{l} \text{Annual CO}_2 \text{ emissions} \\ \text{from motorcycle} \\ \text{moving per person}^{*2} \end{array} - \begin{array}{l} \text{Annual CO}_2 \text{ emissions} \\ \text{from an electrically-} \\ \text{assisted bicycle} \end{array} \right) \times \begin{array}{l} \text{Replacement} \\ \text{rate from moving} \\ \text{by motorcycle} \end{array} \\ & + \left(\begin{array}{l} \text{Annual CO}_2 \text{ emissions} \\ \text{from bus} \\ \text{moving per person}^{*2} \end{array} - \begin{array}{l} \text{Annual CO}_2 \text{ emissions} \\ \text{from an electrically-} \\ \text{assisted bicycle} \end{array} \right) \times \begin{array}{l} \text{Replacement} \\ \text{rate from} \\ \text{moving by bus} \end{array} \\ & + \left(\begin{array}{l} \text{Annual CO}_2 \text{ emissions} \\ \text{from car} \\ \text{moving per person}^{*2} \end{array} - \begin{array}{l} \text{Annual CO}_2 \text{ emissions} \\ \text{from an electrically-} \\ \text{assisted bicycle} \end{array} \right) \times \begin{array}{l} \text{Replacement} \\ \text{rate from} \\ \text{moving by car} \end{array} \\ & \left. - \begin{array}{l} \text{Annual CO}_2 \text{ emissions} \\ \text{from an electrically-} \\ \text{assisted bicycle} \end{array} \times \begin{array}{l} \text{Replacement rate} \\ \text{from moving by} \\ \text{bicycle and walking} \end{array} \right] \times \begin{array}{l} \text{Period} \quad (8 \text{ years}) \end{array} \end{aligned}$$

Annual avoided emissions per electrically-assisted bicycle

*2 Annual CO₂ emissions: The data related to a train, motorcycle, bus, and car was based on the Lifecycle Inventory Database IDEA Ver.3.4 managed by Sustainable Management Promotion Organization (SuMPO). Annual CO₂ emissions from an electrically-assisted bicycle was calculated by us.

Amount of activities: (Unit)

Number of annual sales of electrically-assisted bicycles

Replacement rate: (Unit)

Specified according to means of transportation in surveys conducted to purchasers of electrically-assisted bicycles fiscal 2024 model. (Right table)

- Survey period: July 2023 to August 2024
- Effective answers: 4,836

Period: (Flow method*3)

*3 Include entire lifetime CO₂ emissions of the product in its first sales of the year

- Electrically-assisted bicycle life (8 years)
- CO₂ reduction effects continue during the period (assumption)

Fiscal 2026 avoided emissions: 168 thousand tons

Means of Transportation Before Purchase of an Electrically-Assisted Bicycle, and Its Percentage (Replacement Rate)

Means of Transportation	Replacement Rate
Train	2.9%
Motorcycle	3.5%
Bus	2.1%
Car	19.1%
Walking	12.3%
Bicycle	37.6%
Electrically-assisted bicycle (Note)	(22.5%)

Note: The figure for purchase electrically-assisted bicycles indicates the percentage of purchasers who had already owned or used electrically-assisted bicycles.

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Initiatives to raise awareness of and enhance the recognition of avoided emissions

While established frameworks exist for assessing greenhouse gas (GHG) emissions associated with a company’s business activities, they do not fully capture its contribution to decarbonization across society through those activities, that is, the opportunity side of climate action. Although the concept of avoided emissions is becoming widespread, internationally unified standards and a disclosure system that enables data comparison are still under development. In this situation, it is important to build an environment in which companies’ contributions to decarbonization are properly evaluated while advancing technological development and innovation.

Panasonic GREEN IMPACT, our long-term environmental vision, is designed to value not only our own contributions to CO₂ emissions reduction, but also those of society as a whole. We regard avoided emissions as one indicator of a company’s contribution to decarbonization. Based on this view, we work with companies, financial institutions, and international organizations that share the same ambitions. Through this collaboration, we contribute to international standardization efforts, raise awareness, and promote practical implementation. In doing so, we seek to create an environment that drives the decarbonization of society as a whole and enables appropriate evaluation of avoided emissions in the capital market.To this end, we advance standardization, social implementation, and financial sector engagement in an integrated manner, with the aim of translating avoided emissions into financial value and enhancing corporate value.

■ Standardization Activities

International Electrotechnical Commission (IEC)

The international standardization of avoided emissions, to which we have contributed, has progressed, and IEC 63372, covering electrical and electronic products and systems, was published in January 2026. This international standard addresses quantification and communication of carbon footprints, GHG emission reductions, and avoided emissions of electrical and electronic products and systems. It clarifies important points within the actual quantification and communication, including reporting avoided emissions separately from the company’s own GHG inventory emissions, determining baselines, defining system boundaries, and avoiding double counting for GHG data. As a member of the international committee, we contributed to the development of the standard, including by providing calculation examples.

World Business Council for Sustainable Development (WBCSD)

WBCSD is a global organization of approximately 200 leading companies committed to sustainable development, working together to accelerate the transition to a sustainable world. Endorsing the principles of WBCSD, Panasonic Holdings Corporation (PHD) joined WBCSD in 2022 to accelerate the Panasonic Group’s PGI activities. Following the publication of Guidance on Avoided Emissions in 2023, WBCSD has been working on an updated version of the

guidance and developing sector-specific guidance. As a member of WBCSD, we also participate in discussions concerning such revisions and their implementation. WBCSD helps connect the concept of avoided emissions with corporate practices and dialogue with the financial sector. We also work with other member companies and relevant stakeholders to improve the credibility of avoided emissions and promote their wider adoption.

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

International Organization for Standardization (ISO) and Greenhouse Gas Protocol (GHG Protocol)

In fiscal 2025, significant progress was also made within ISO and GHG Protocol. Under their strategic partnership, ISO and the GHG Protocol are working to integrate the revision of ISO 14064-1: Greenhouse gases - Part 1: Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals with the GHG Protocol’s corporate standards into harmonized, co-branded international standards. Within the GHG Protocol’s Actions and Market Instruments (AMI) discussions, work is under way on a framework for transparently reporting decarbonization impacts on society, including avoided emissions. Through alignment across the IEC standard, WBCSD guidance, ISO, and the GHG Protocol, we aim to create an enabling environment in which avoided emissions can be used as a transparent and comparable indicator. This will support corporate disclosure of contributions to decarbonization, dialogue with financial institutions, and broader societal understanding of such contributions.

GX League*

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

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

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

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Converting CO2 Reduction Impact into Business Growth, Financial Value, and Corporate Value

Creation and Expansion of Economically Rational CE Business

Environmental Action Plan GREEN IMPACT PLAN

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Our Businesses' Contribution to Carbon Neutrality

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

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

Appeal of the avoided emissions at international events

As a result of our fiscal 2023 activities for raising awareness and dissemination of the avoided emissions at international events, the activities were clearly stated in the 2023 G7 outcome documents. We have continued working to raise awareness and valorize the avoided emissions in fiscal 2026.

COP30 (The 2025 Conference of the Parties of the United Nations Framework Convention on Climate Change (UNFCCC))

In November 2025, the Panasonic Group participated in the seminar, “Turning Avoided Emissions into Corporate Value—Paving the Way for Practical Action,” organized by the Ministry of Economy, Trade and Industry (METI) in the COP30 Japan Pavilion. We presented the three steps that corporations should take for disclosure: standardizing the calculation processes; collecting concrete examples of calculations; and disclosure of calculation results based on standardization. We also mentioned that one current challenge is that only a limited number of corporations disclose avoided emissions. Therefore, it is essential to increase the quantity and quality of avoided emissions disclosures so that they are properly valued by stakeholders. We also introduced the Avoided Emissions Platform, a global database of avoided emissions impact, in which we participate.

Initiatives to Enhance Awareness, Standardization and Financial Sector Engagement for Cooperation with Avoided Emissions

FY2023					FY2024			FY2025				FY2026	
Awareness- enhancement	Progress	Recognition of avoided emissions was limited, and international standards for calculation and disclosure had yet to be established.			Clearly stated in the official documents	Moved forward with the discussions on the social value significance of avoided emissions and the need for standardization.		Moved forward with the use of a performance indicator for evaluating avoided emissions by financial institutions and other organizations.				Published international standards in the electrical and electronics fields.	
	International frameworks, conferences, etc.	Tokyo GX Week / GGX ^{*1}	COP27 ^{*2} Japan Pavilion, etc.	Sustainable Bond Conference ^{*3}	G7 Sapporo Ministerial Meeting, Hiroshima Summit	Tokyo GX Week / GGX ^{*1} × TCFD Summit	COP28 ^{*6} Japan Pavilion, etc.	6th CEFIA Public-Private Forum ^{*4}	WBCSD Two Lakes Dialogue	COP29 ^{*2} Japan Pavilion, etc.	CES 2025 keynote	COP30 ^{*2} Japan Pavilion, etc.	
	Key messages from Panasonic	Communicated the significance of avoided emissions and importance of expanding international recognition.	Promoted balance between decarbonization and economic growth through avoided emissions	Announced increase in avoided emissions and communicated the importance of evaluating avoided emissions even amid a production increase.	Advocated that appropriate evaluation of corporate decarbonization would contribute to achieving a decarbonized society at METI's GX League.	Communicated the significance, fairness and comparability of decarbonization indicators.	Emphasized standardization, fairness and comparability for the financial sector with a view to financial use.	Communicated the visualization and significance of avoided emissions in ASEAN.	Communicated our expansion of avoided emissions across various business and the promotion of environmental contribution projects in China.	Communicated the significance and progress of standardization.	Communicated the importance of avoided emissions to accelerate decarbonization technologies and innovation.	Communicated the importance of ensuring the quantity and quality of avoided emissions.	
		Initiated action to gain global recognition for the value of avoided emissions in PGI.											
International Standardization		IEC Japan and Germany participated in IEC 63372 Publication of Panasonic case studies in the Committee draft second edition (CD2) Committee Draft for Voting (CDV) Final Draft International Standard (FDIS) International Standard IEC 63372:2026 January 2026											
		October: Panasonic joined			Alignment		Aligned with revisions of the GHG protocol.						
		WBCSD Guidance published: Panasonic endorsed the significance of avoided emissions.			Compilation of case studies/ Revision in progress								
Financial sector engagement for cooperation		June: Kick off and Panasonic participated. Alignment METI GX League Announced the Basic Policy. Lead rule-making activities for creating new markets at the GX Management Promotion Working Group. Compilation of case studies for financial institutions Compilation of recommended disclosure case studies for operating companies Disclosed Panasonic Group's avoided emissions on the GX League Dashboard. Expanding dialogue with companies and organizations globally											

*1 GGX: Global Green Transformation Meeting

*2 COP27 (November 2022, Egypt), COP28 (November 2023, UAE), COP29 (November 2024, Azerbaijan), and COP30 (November 2025, Brazil)

*3 Co-hosted with the International Capital Market Association (ICMA) and the Japan Securities Dealers Association

*4 Cleaner Energy Future Initiatives for ASEAN (CEFIA) is a public-private partnership framework platform led by METI to promote decarbonization in Asia. The 6th Public-Private Forum, Session 6 (Bangkok, Thailand)

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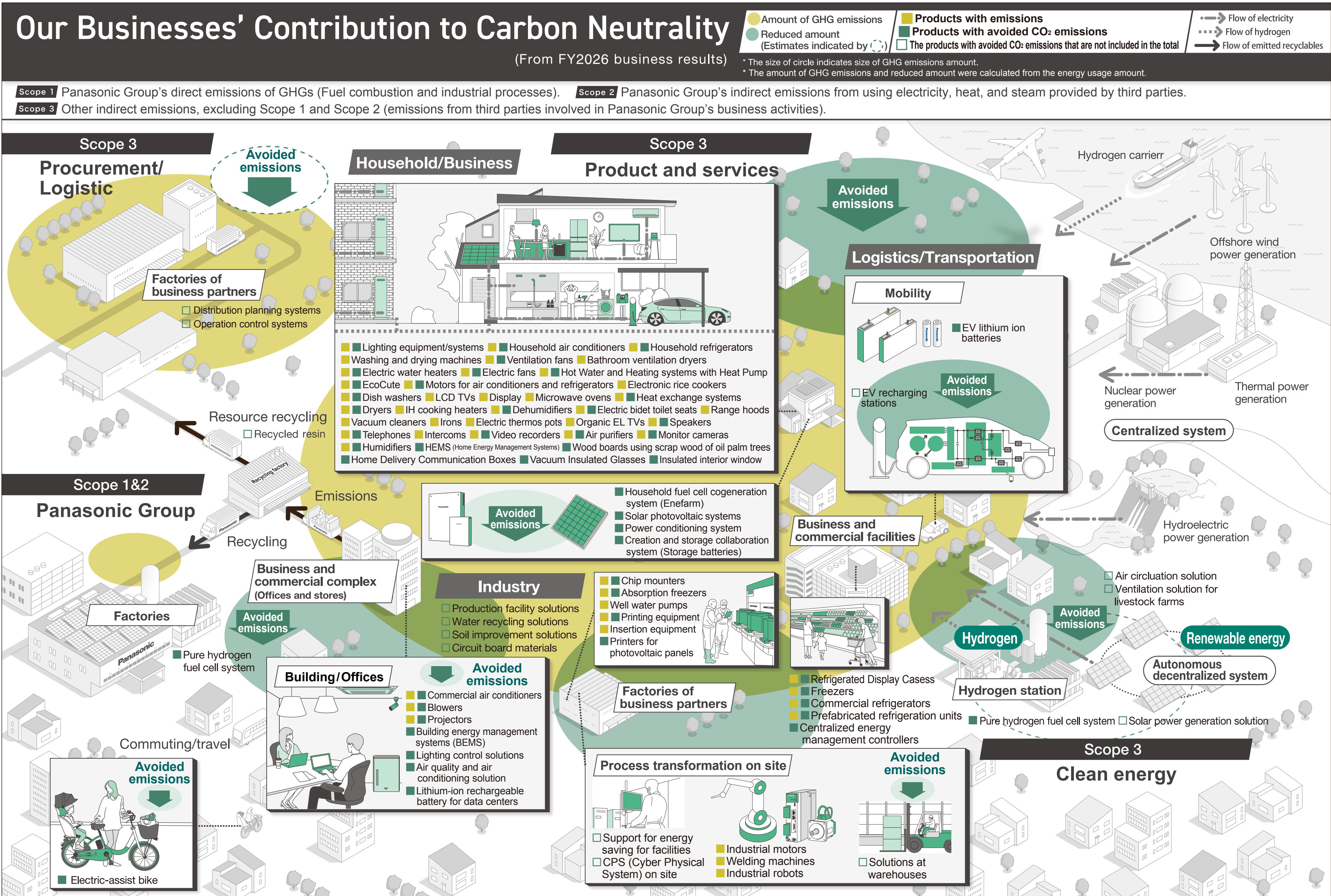
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* Total of the number of product names given in the Figure for emissions/reduction contribution does not match the number of businesses given in our GREEN IMPACT PLAN on Pages 16-17, due to mergers and splitting of operations in some product groups.

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.

From 2026, the progress made in the KPIs established under GREEN IMPACT PLAN, as well as issues and social developments, are deliberated in the Group Transformation Round Table attended by Group Business CEOs and other meetings. Depending on their importance, the issues deliberated and decisions made are reported to the Board of Directors, which directs groupwide sustainability measures, for them to make prompt decisions.

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

See [☞Environmental Governance](#) for more details.

Strategy

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

See Strategic Resilience through Scenario Analysis 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) 2028. We have also set out following medium-term targets.

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

See [pages 36-38](#) for initiatives for Scope 1 and Scope 2.

Risk Management

As a tool to continuously reduce environmental risks, Panasonic Group is working to establish operating company-specific Environmental Risk Management Systems, in accordance with the basic risk management policy for all Group companies (see [page 114](#)). The management policy includes identification of environmental risks and group-wide risk management each year, and ensuring quick responses to reported environmental risks.

At Panasonic Holdings Corporation (PHD), once a year, risks requiring a response or monitoring by PHD or the Group, as well as their priorities, are identified, analyzed and assessed from top-down, bottom-up and cross-functional perspectives, based on changes in the external and internal environment and management’s recognition of risks in light of the Group’s management policies and plans.

In addition, The Panasonic Group is promoting risk management based on the same process at Panasonic Holdings Co., Ltd. and operating company. Once a year, the Enterprise Risk Management Committee identifies risks that could affect the entire Group based on changes in the external and internal environment and management’s risk awareness. In fiscal 2026, the Panasonic Group addressed high-priority risks related to environmental issues and climate change.

See page [☞Environmental Risk Management](#) for more details.

Metrics and Targets

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

In addition, we set long-term targets and received accreditation for our net-zero emissions targets in September 2024.

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

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GHG emissions reduction targets (SBT 1.5°C accreditation)

	Target	Progress rate
Emissions from Panasonic Group business activities (Scopes 1 and 2)	Reduce by 90% by 2030 (compared to FY2020) 2019: 2,311 kt	52%
Emissions from use of Panasonic Group products (Scope 3)	Reduce by 30% by 2030 (compared to FY2020) 2019: 95,040 kt	—*3

GHG emissions reduction targets (SBT net-zero accreditation)

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

*3 Progress rate not calculated due to increase in emissions because of expansion of products subject to calculation (see [page 17](#))

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

• Transition risk

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

• Physical risk

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

• Climate-related business opportunities

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

In addition to our business operations in the automotive battery business for environmentally friendly vehicles that are designed to significantly reduce CO₂ emissions and activities to reduce CO₂ emissions from our air quality and air conditioning business in Europe, we are working to reduce environmental impact in the data center business by improving energy efficiency and minimizing the power consumption associated with power conversion loss and cooling. This is achieved using a novel cooling system, in which three layers of technology—power supply, devices, and cooling—are optimized through integration of a highly efficient power system, high performance devices, and air and liquid coolers.

• Internal carbon pricing

Panasonic Group introduced internal carbon pricing (ICP) in March 2022 for capital investment, with a setting the price of CO₂ emissions at 6,000 yen/t- CO₂.^{*4} We plan to increase the installation of energy-saving facilities and renewable energy-fueled equipment, including photovoltaic power generation, while maintaining economic rationality that is consistent in the future, by considering the impact of future carbon taxation and the like. As for further expansion in the scope of our activities and price setting, we will determine in line with our business decisions.

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

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

• Remuneration

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

^{*4} Subject to change because of market conditions

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TNFD Recommendations*1

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

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

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

General Requirements

- (1) The approach to materiality
This report assesses and describes “impacts from natural capital on our business activities” and “impacts from our business activities on natural capital” applying a dual materiality approach.
- (2) The scope of disclosures
This report adheres to the four pillars of the disclosure recommendations, which are Governance, Strategy, Risk & Impact Management, and Metrics & Targets. The scope of the analysis covers the Panasonic Group’s business activities and those of the upstream and downstream of the supply chains. The analysis includes nature-related impact from all manufacturing sites across the group, and then the business-related dependencies and impacts were analyzed under the electronics sector. The risks and opportunities were identified using the LEAP approach,*2 recommended by TNFD, and scenario analysis.
- (3) The location specificity of nature-related issues
The analysis used data from the areas where we operate.
- (4) Integration with other sustainability-related disclosures
The analysis took into account the relation to environmental issues, such as climate change and resource recycling.
- (5) Time span
We use three time spans: Short term—up to three years into the future; Medium term—up to 2030; and Long term—up to 2050.
- (6) Stakeholder engagement
We hold dialogues with major media outlets coinciding with the publication of annual sustainability data books. We also hold regular meetings between external experts and our

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

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

Governance

Aiming to build a sustainable society, the Panasonic Group regards issues relating to natural capital—such as biodiversity—as a critical management issue. We manage such issues under Groupwide governance using the same system and schemes as we do for TCFD (see [page 28](#)). We are working to build a society in harmony with nature, contributing to a nature-positive future by supporting the recovery of natural ecosystems. As a part of this effort, we value the human rights of any stakeholders who could be affected indirectly by nature altered by our businesses and supply chain—especially those who are vulnerable to environmental deterioration, such as indigenous peoples and local communities. Such stakeholders have the right to obtain accurate and appropriate information, the right to effectively participate in decision making concerning their environment (including the right of self-determination and to prevent forced relocation of indigenous peoples and local communities), and the right to receive effective remedies. We understand the importance of such rights, as well as of engagement with them to support and exercise their rights. We are aiming to enhance our capability to address these issues.

Strategy

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

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

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

In 2024, we qualitatively evaluated our businesses’ relationships with nature and prioritized any issues using the ENCORE^{*3} and LEAP approaches. The scope of this assessment covered general product life cycles, including procurement, production, usage, and disposal. The production phase was then analyzed according to the Group companies—Living Appliances and Solutions, Connect, Industry, Energy, and others. Subsequently, these analyses were studied according to the characteristics of major products. We plan to build a more precise assessment

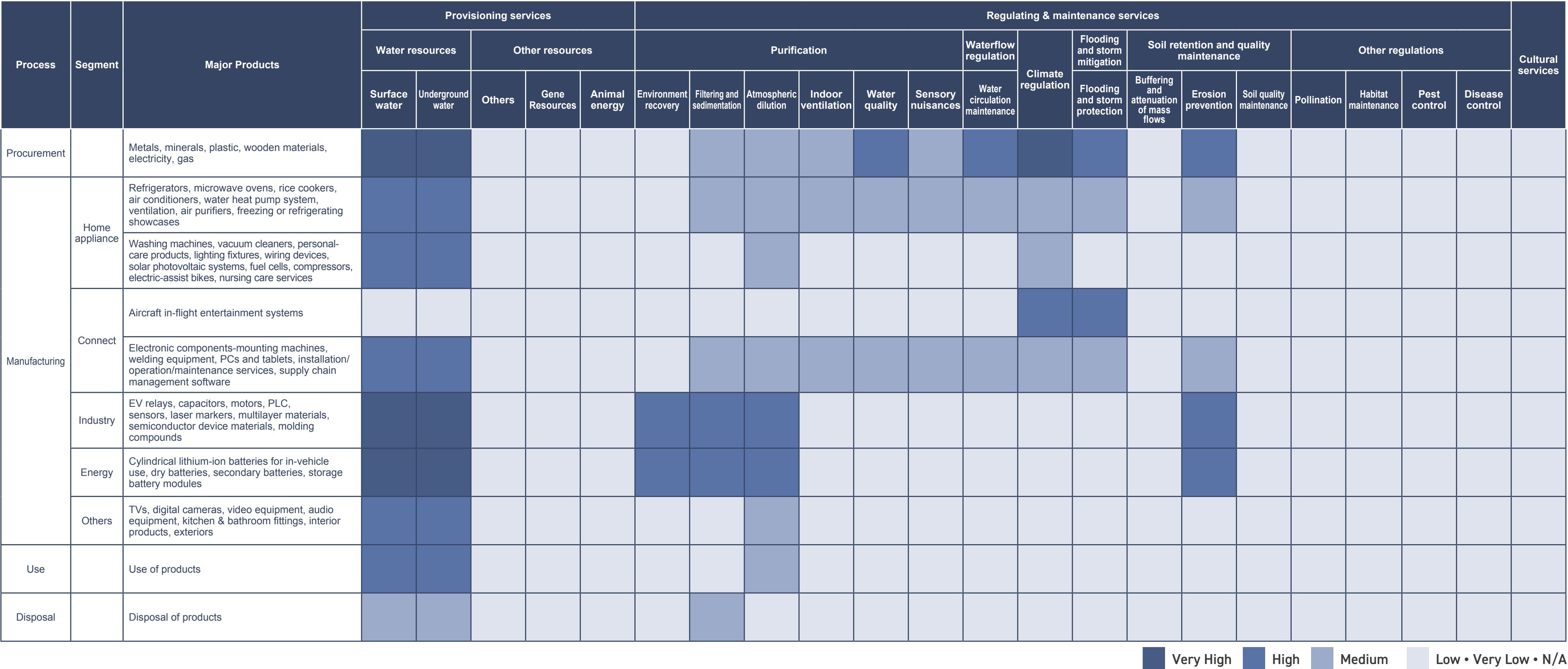
system by continuing detailed analysis and improving the assessment procedure.

^{*3} ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure. A tool developed by the UN Environment Programme World Conservation Monitoring Centre (UNEP-WCMC) to systematically visualize how businesses impact and depend on natural capital, enabling companies to be aware of their exposure to nature through business operations and material procurement in the supply chain. The tool is recommended by the TNFD Guidance and the Ministry of the Environment.

■ Dependency Heatmapping

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

Ecosystem service dependency heatmap



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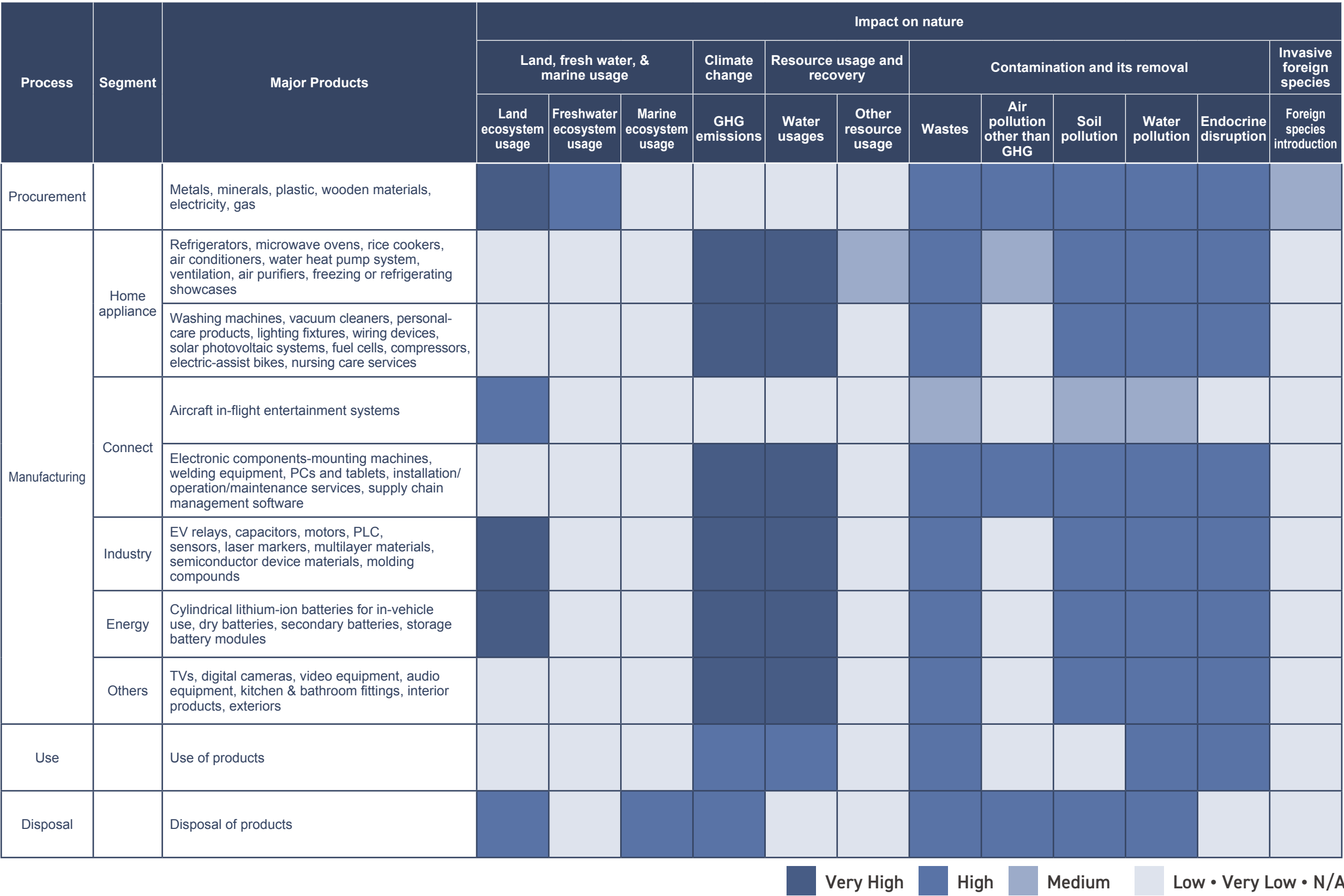
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■ Impact Heatmapping

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

Ecosystem service impact heatmap



■ Locating Nature Priority Sites (Locate)

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

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Sensitive locations among all manufacturing sites

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

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

■ Identifying Risks and Opportunities Based on Scenario Analysis

Identifying Risks and Opportunities

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

- Nature Positive (NP) Scenario

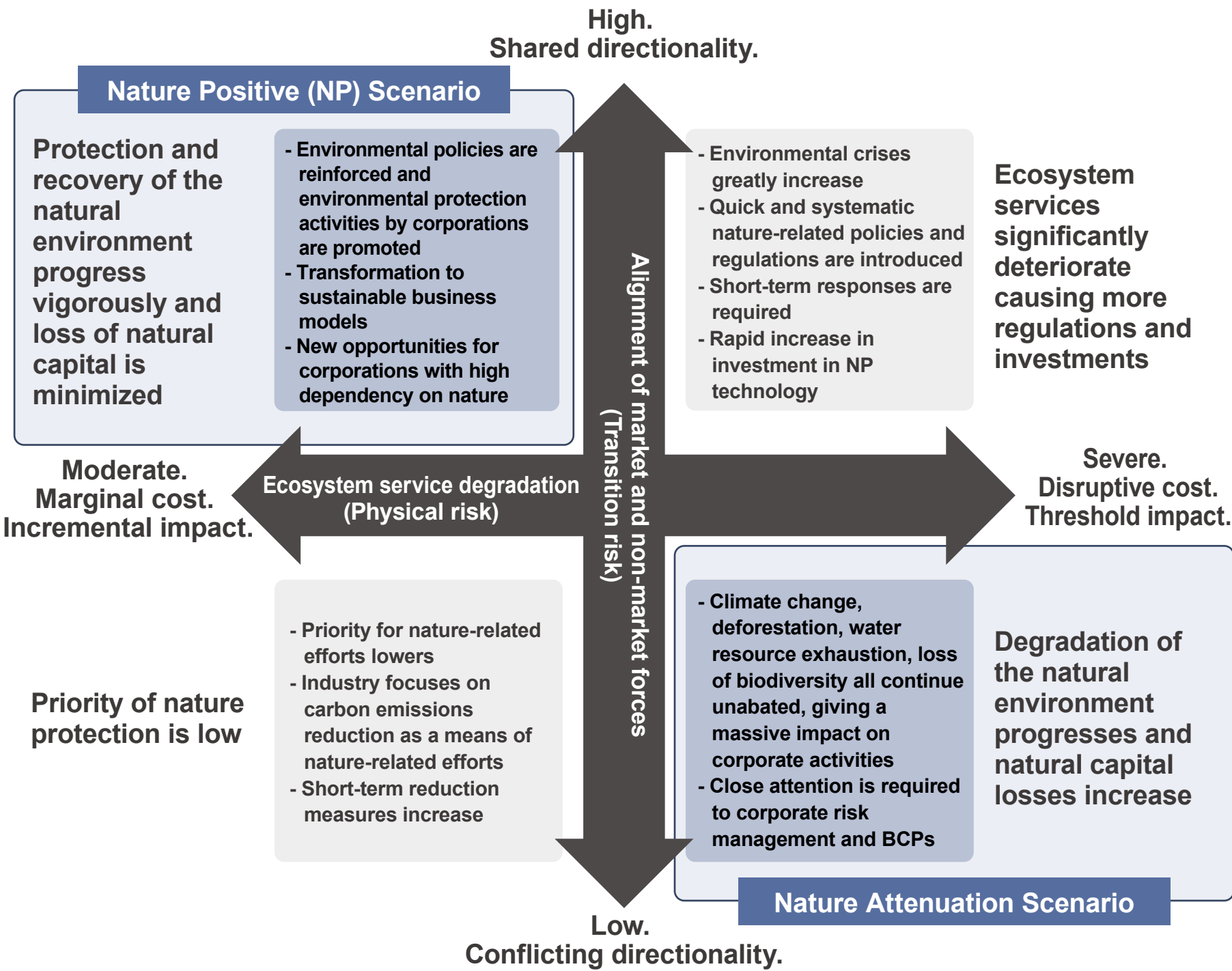
This scenario assumes vigorous progress in nature protection and recovery whereby natural capital would be recovered in the future. This is a scenario based on Vision 2050 of the Kunming-Montreal Global Biodiversity Framework (GBF), which aims at a world living in harmony with nature, or equivalent to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

- Nature Attenuation Scenario

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

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

Four Scenarios and Assumed Worlds



■ Scenario Analysis on the Value Chain Upstream

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

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

Risks, opportunities, and countermeasures (upstream)

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

■ Scenario Analysis of Direct Operations in the Value Chain

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

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

Risks, opportunities, and countermeasures (direct operations)

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

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■ Scenario Analysis in the Value Chain Downstream

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

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

Risks, opportunities, and countermeasures (downstream)

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

Risk and Impact Management

The Panasonic Group regards issues related to natural capital, including biodiversity, as a critical management issue, just as we do for climate change issues. We are working to alleviate impacts from identified risks and enhance opportunities by integrating them within the Groupwide risk management system, as we do for TCFD (see [page 28](#)).

Metrics and Targets

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

Future actions

Under the Group's long-term environmental vision, Panasonic GREEN IMPACT, we began TNFD framework-aligned disclosures from a Panasonic Group perspective in the previous fiscal year to visualize our dependencies and impacts on natural capital, including biodiversity, and to accelerate the sustainable creation of corporate value. This fiscal year, we initiated an analysis of our nature-related risks and opportunities based on the LEAP approach, focusing on our lithium-ion battery business, one of our growth areas.

Going forward, we will use this analysis as a starting point to further refine our analysis and enhance our disclosures in a phased manner. We will also advance initiatives to mitigate future impacts and promote conservation and restoration, further deepen our TNFD disclosures, and enhance corporate value over the medium to long term.

Climate Change Materiality

Reducing CO₂ Emissions at Our Sites

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

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

For this medium term, we established the GREEN IMPACT PLAN 2024+1. In our efforts for OWN IMPACT Scopes 1 and 2, we have increased the number of net zero sites to 60, reducing CO₂ emissions by 960,000 tons as a result. In the Medium-Term Management Plan starting in fiscal 2027, our target for Own Impact Scopes 1 and 2 under Green Impact Plan 2028 is to increase the number of net zero sites to 86 and at the same time reduce CO₂ at sites to 1.4 million tons through energy conservation and the use of renewable energy sources.

In the Net Zero Factory Promotion Taskforce we started up in September 2021. The taskforce aims to create and provide Group-wide measures to accelerate the creation of net zero sites. The Taskforce consists of the Energy Saving Working Group (WG) that promotes a range of energy-saving measures, the Renewable Energy Utilization WG that assess the usage expansion of renewable energy in each site, and the Renewable Energy Procurement WG that promotes the procurement of renewable energy. With the participation of related sectors, our manufacturing, procurement, and environment specialists work together to support the united efforts of all operating companies. During this fiscal year, we held seminars to introduce internal excellent examples and the latest information on energy saving and energy recycling to Group members. We also hold study session by region outside Japan.

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

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

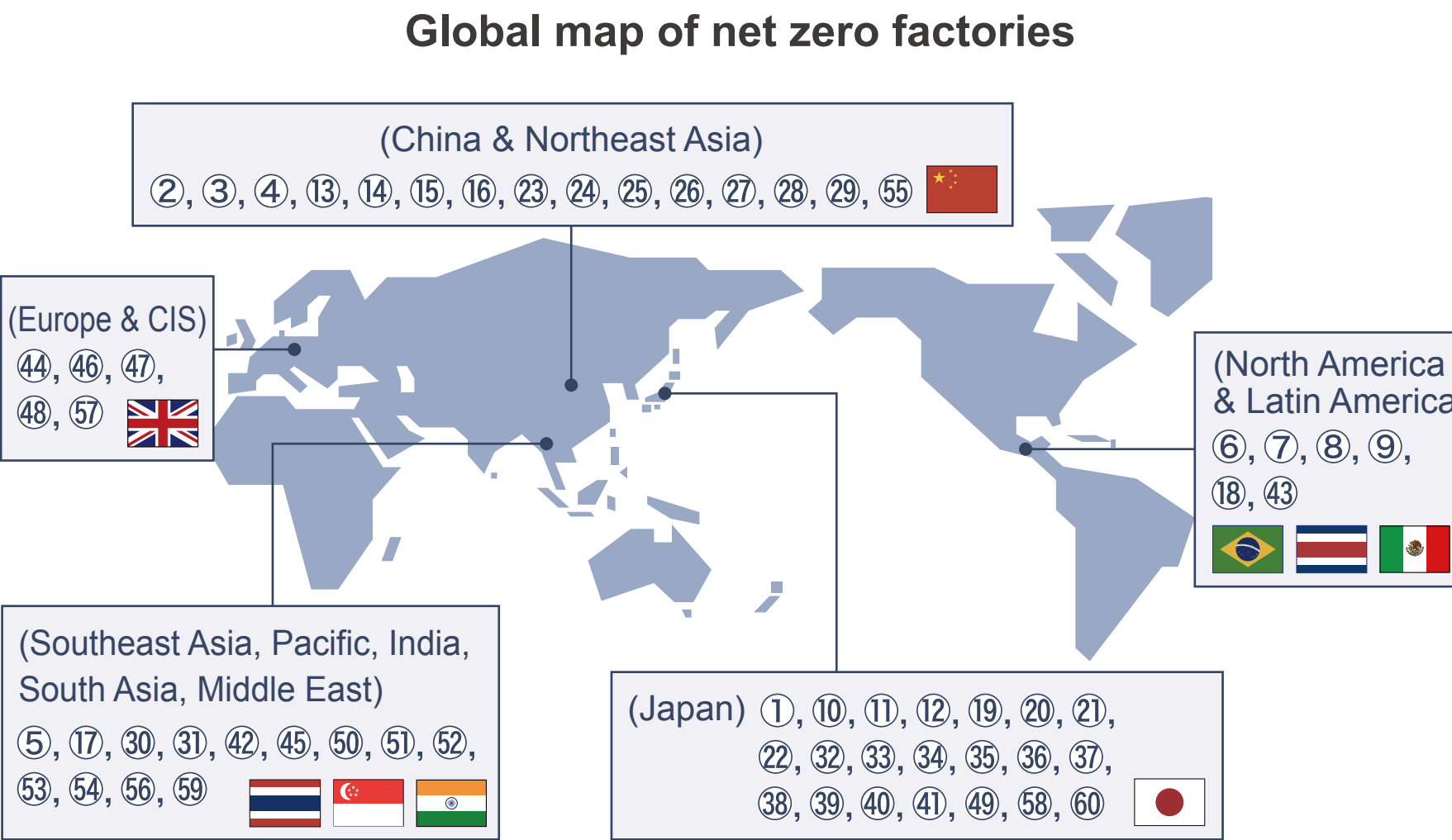
*2 Panasonic’s direction: To become a top runner in the fields of “environment” and “high usability in business.”
<https://news.panasonic.com/global/stories/2021/90376.html>

Increasing the number of net zero sites

After realizing the group’s first net zero factory in fiscal 2019, Panasonic Group has realized 9 net zero sites in 5 regions*³ by fiscal 2022.

Subsequently, we entered the phase to increase the number of net zero sites: to 31 sites in fiscal 2023, 44 sites in fiscal 2024 and 45 sites in fiscal 2025; then in fiscal 2026, a total of 60 sites*⁴ - 21 sites in Japan (+2 over the previous year), 15 sites in the China and Northeast Asia regions (+1), 13 sites in the Southeast Asia, Pacific, India, South Asia, Middle East, and Africa regions (+8), 6 sites in the North America and Latin America regions (+0), and 5 site in Europe and CIS (+4). This has exceeded the GIP2024+1 target to reach a total of 49 sites with net zero CO₂ emissions.

(The number of new net zero sites in each fiscal year excludes the 12 sites that reached net zero in fiscal 2024 for Panasonic Automotive Systems Company, which became unconsolidated in December 2024, and Panasonic Solar Amorton Co. Ltd., which was transferred in fiscal 2026.)



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

*4 Net zero sites are shown below. The sites in China that are underlined have been assessed under criteria prior to the revision of the Green Electricity Certificates rules in China in accordance with enforcement of the Implementation Rules for the Management of Renewable Energy Green Electricity Certificates (Trial) in November 2025.

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Up to fiscal 2022: ① Panasonic Eco Technology Center Co., Ltd., ② Panasonic Energy (Wuxi) Co., Ltd., ③ Panasonic Energy (Suzhou) Co., Ltd., ④ Panasonic Manufacturing (Beijing) Co., Ltd., ⑤ Panasonic Energy (Thailand) Co., Ltd., ⑥⑦⑧ Panasonic Do Brazil (Includes 3 Factories (San Jose, Manaus, Extrema)), ⑨ Panasonic Centroamericana S.A.

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

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

Fiscal 2025: ㉜ Panasonic Electric Works Co., Ltd. Niigata Factory, ㉝ Panasonic Electric Works Co., Ltd. Tsu Factory, ㉞ Panasonic Electric Works Electrical Construction Materials Mie Co., Ltd. Headquarter Factory, ㉟ Panasonic Electric Works Electrical Construction Materials Mie Co., Ltd. Anotsudai Factory, ㊱ Panasonic Lighting Devices Kumihama Co., Ltd., ㊲ Panasonic Switchgear Systems Co., Ltd., ㊳ Panasonic Energy Co., Ltd. (Wakayama Factory), ㊴ Panasonic Energy Co., Ltd. (Moriguchi Factory), ㊵ Panasonic Energy Kaizuka Co., Ltd., ㊶ Panasonic XC KADOMA, ㊷ Panasonic Manufacturing (Thailand) Co., Ltd., ㊸ Panasonic Industrial Devices Mexicana S.A. de C.V., ㊹ Panasonic Manufacturing UK Ltd.,

Fiscal 2026: ㊺ Panasonic Industrial Devices Vietnam Co., Ltd., ㊻ Panasonic Industrial Devices Slovakia s.r.o., ㊼ Panasonic Industrial Devices Europe GmbH Pfaffenhofen, ㊽ Panasonic Industry Europe GmbH, ㊾ Panasonic Switching Technologies Co., Ltd. Ishioka Factory, ㊿ Panasonic Appliances Vietnam Co., Ltd.-RF, ㏀ Panasonic Appliances Vietnam Co., Ltd.-LV, ㏁ Panasonic Manufacturing (Thailand) Co., Ltd.-AP, ㏂ Panasonic Appliances India Co., Ltd., ㏃ Panasonic Manufacturing Philippines Corporation-HQ, ㏄ Panasonic Ecology Systems Guangdong Co., Ltd., ㏅ Panasonic Appliances Air-Conditioning Malaysia Sdn. Bhd., ㏆ Panasonic Heating & Ventilation Air-Conditioning Czech, s.r.o., ㏇ Panasonic Industry Co., Ltd. Headquarters Tokyo, ㏈ PT. Panasonic Gobel Energy Indonesia DBD, ㏉ Panasonic Energy Co., Ltd. (Nishikadoma)

■ 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/application of renewable energy facilities in our own sites and renewable energy procurement from external suppliers.

The amount of renewable energy adopted at our sites*5 in fiscal 2026 marked 0.14 TWh.

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

Panasonic HVAC & CC Systems Co., Ltd. installed a photovoltaic power generation system with a generation capacity of 5.2 MW in fiscal 2025 at the Hot-Water and Heating Systems with Heat Pump (A2W) plant building of Panasonic Appliances Air-Conditioning Malaysia Sdn. Bhd. (PAPAMY). In fiscal 2026, an additional photovoltaic power generation system with a capacity of approximately 4.0 MW has been installed in the air conditioner compressor production plant

building, resulting in startup of photovoltaic power generation totaling 9.2 MW for the PAPAMY site as a whole. The photovoltaic power generation capacity is the largest of its kind in the Panasonic Group. Annual power output reaches approx. 10,338 MWh (estimate), with CO₂ emission reductions totaling approx. 6,703 t (estimate) per year. Photovoltaic power generation is expected to supply roughly 18% of the total power consumption of the entire site.*6



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

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

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

Procurement of renewable energy from external sources has been also promoted across the globe. In Japan, at our own site, we are an electricity user, and at the same time, an electricity retailer (registration number: A0136). Since 2005, we have been supplying power to our own sites, factories, and offices. Utilizing our knowhows and experience of electricity procurement and trading that we have accumulated to date, we procure 100% renewable electricity generated from wind, etc., as well as electricity with environmental value such as those with non-fossil fuel energy certificates and credits to offset CO₂ emissions from fossil fuel. This effort contributed to converting factories in Japan, China, and Southeast Asia to net zero factories. Furthermore, the photovoltaic power station with approx. 18,000 kW capacity for use at our own sites that we determined to develop in fiscal 2022 started its operations for Panasonic Energy Co., Ltd., in February 2023. In fiscal 2024, operation of power stations with a capacity of approx. 11,500 kW started for Panasonic Automotive Systems Co., Ltd. and Panasonic Industry Co., Ltd. In fiscal 2025, an additional power generation plant with a capacity of roughly 18,000 kW came into operation as a startup power supply for Panasonic Living Appliance and Solutions Company. In the same fiscal year, full scale supplies of power from an onshore wind power generation plant started for Panasonic Energy Company and Panasonic Industry Co., Ltd. As described above, we continue to contribute to expanding use of electricity from new renewable energy sources. We also started selling to Panasonic Group employees in Japan, electricity derived from practically 100% renewable energy in fiscal 2021.



An onshore wind power generation plant for the Panasonic Group.

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 2026 was 37.2%.

*5 The amount from photovoltaic energy is included. The amount from heat pumps is excluded.

*6 Press release on February 12, 2026
<https://news.panasonic.com/jp/topics/206608>

*7 Press release on August 30, 2019.
Panasonic Joins RE100 Aiming for Business Operations with 100% Renewable Energy
<https://news.panasonic.com/global/press/data/2019/08/en190830-2/en190830-2.html>

Activities for reducing energy use and CO₂ emissions

To ensure implementation of reduction of the amount of energy used and CO₂ emissions, it is important to visualize trend of the energy consumption of each facility in the site and the effects of the measures for specific emissions reduction. To date, we are working on CO₂ reduction by adopting more than 40,000 measurement equipment systems and Factory Energy Management System (FEMS) at all of our global manufacturing sites, promoting METAGEJI (Meter and Gauge)*⁸, which visualizes and analyzes energy consumption. An example of factory energy-saving support service is on the following website.

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

In fiscal 2026, we expanded the scale of energy saving activities at our non-manufacturing sites. Although non-manufacturing sites tend to be of secondary in importance over manufacturing sites, these sites have numerous energy consumption sources, including lighting fixtures, air conditioning systems, IT devices and transport facilities and current important but complicated concerns for promoting energy conservation.

Because of the irregular operating hours and energy use load at non-manufacturing sites in comparison to manufacturing sites, there is much to be done in the area of energy saving through operational improvements and facility updates. In recognition of the issues, energy saving diagnosis of our non-manufacturing sites was conducted by outside experts, focusing in particular on the development division, logistics warehouses and building/facility management division, considering the commonality of issues and the projected ripple effects.

The knowledge obtained in the diagnosis has been applied to non-manufacturing sites in the most useful form. At the same time, the knowledge, along with commentary by in-house specialists, has been systematized in an easy-to-understand style and released internally as manuals and effect estimation tools, to enable work sites to identify improvement themes and estimate effect in their energy saving studies. At present, the knowledge and tools are being utilized by non-manufacturing sites in starting up energy-saving activities and broadening their application. We expect to accelerate these activities at non-manufacturing sites in this manner, sharing and expanding application to the Group as a whole, both manufacturing and non-manufacturing, and making solid advances in cutting down energy consumption and CO₂ emissions in our business activities.

*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.

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

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

From fiscal 2023 to fiscal 2025, we developed a regional energy saving platform and engaged in energy-saving diagnosis, development of an energy-saving infrastructure and of human resources through joint efforts with the head office and outside experts. At the same time, we improved the diagnostic and recommendation skills of regional members through specialized training, energy saving diagnosis tours and inspection tours of outside companies that are advanced in the area.

In fiscal 2026, we introduced an energy saving diagnosis service provided chiefly by regional members, achieving non-dependent energy saving support in the region. Diagnosis was conducted at two plants and is estimated to generate energy-saving effects of 1,173 MWh per year. Additionally, we provided 12 energy saving tools, including compressor measurement and analysis kits, to help identify energy saving problems and boost visibility of the effects.



Diagnosis of energy saving diagnosis in China region

In working to establish net zero factories, we continue with our rapid and low cost energy-saving measures to improve the level of energy saving in China’s regions.

Fiscal 2026 Results

These efforts in fiscal 2026 produced 4.5 TWh of the energy used in our business activities, and the amount of CO₂ emissions under Scope 1 and Scope 2 was 1.142 million tons including deduction of the amount of carbon credits.

Data on other energy consumption volumes, etc., can be found in the Environmental Database ([page 47-50](#)).

The fiscal 2026 investment to reduce the amount of energy used and CO₂ emissions by the efforts was 4.7 billion yen.*⁹

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

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Promotion of Circular Economy

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

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

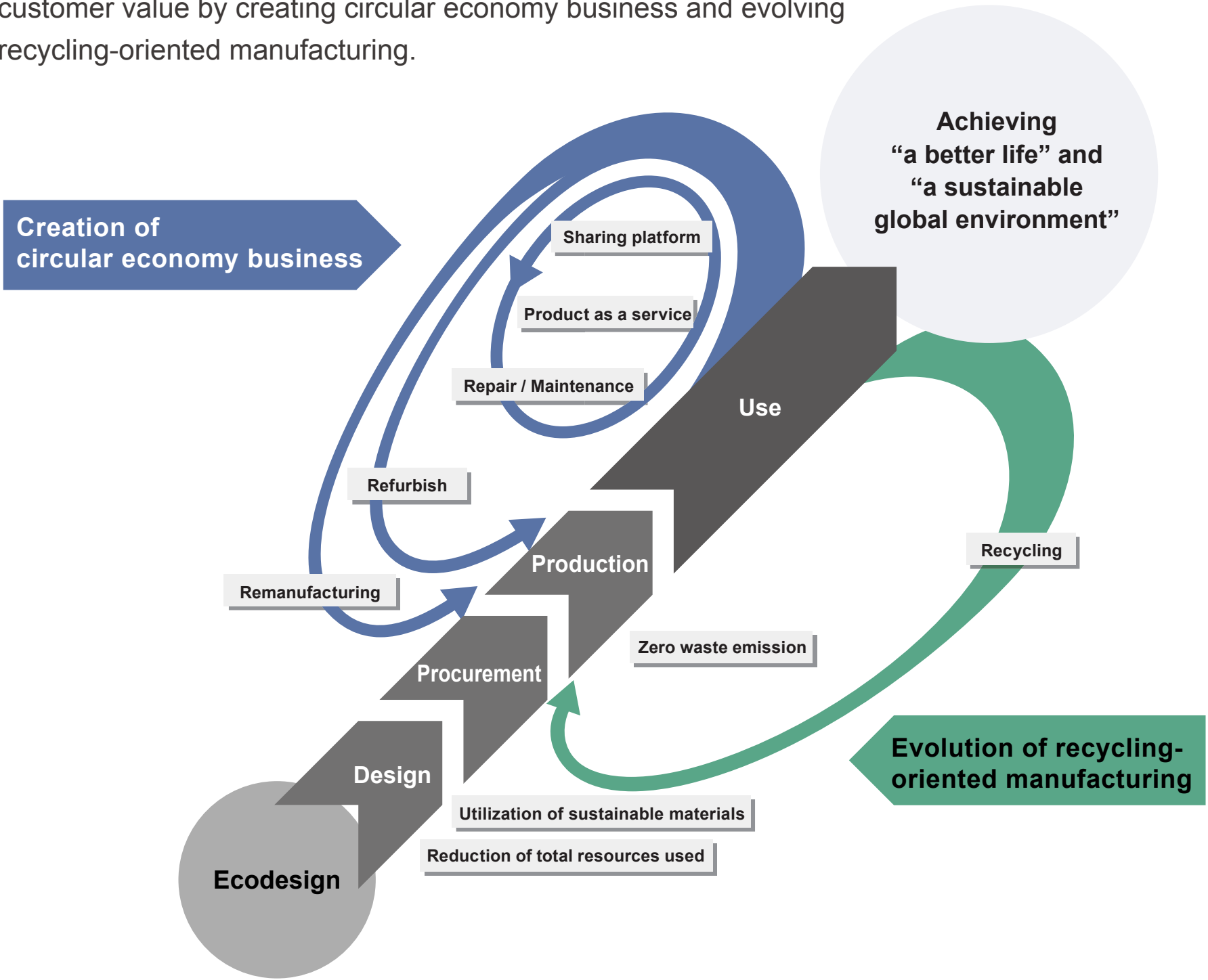
In order to realize the new value of using only product functionalities instead of using or owning the whole product, we will strive to create circular economy businesses. For instance, these include a “Sharing service”, where multiple users use the same individual product, a “Product as a service” where 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 continue to 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, 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.



In fiscal 2026, we worked toward achieving our individual targets under the GIP2024+1.

As for recycled resin, its cumulative usage in fiscal 2026 reached 17,100 tons. In fact, we could not achieve our initially targeted amount of 25,000 tons within one year because of significant price decreases for virgin plastic, but we promoted producing resin that has characteristics suitable for its usage purposes, securing stable supply, establishing adaptability in production sites to use the recycled resin, and developing recycling technologies.

Although we were unable to launch a completely new circular economy business model according to the target set in GIP2024+1, we proceeded in applying the existing 15 businesses to a wider range of products, including the expanded use of recycled materials.

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GIP2028 has newly established targets related to the circular economy. Regarding the use of recycled resin, we have set targets of 17,000 tons for fiscal 2027 and 22,000 tons for fiscal 2028. We will also actively pursue recycled iron as another goal. Regarding circular economy businesses, we will continue to launch new businesses and expand from the existing 15 businesses to 17 by fiscal 2029.

At COP30 in November 2025 in Brazil, the World Business Council for Sustainable Development (WBCSD) jointly with the One Planet Network (OPN, hosted by UNEP (United Nations Environment Program)) launched the new Global Circularity Protocol for Businesses, briefly called GCP*1. The GCP has been developed in a global, multi-lateral collaboration with a wide group of stakeholders, including experts from various industries, academia and think tanks, policy makers, standardization bodies, and financial institutions. We support the GCP and have actively participated in its development to provide a practical framework for circular performance management and disclosure for all kinds of businesses globally. As a member of the "GCP Front Runner Coalition" and a proactive company in the circular economy business, we are considering utilizing and implementing the GCP within our Group.

*1 Global Circularity Protocol (GCP) for Business | WBCSD
<https://www.wbcsd.org/actions/global-circularity-protocol-for-business-gcp/>

Creation of Circular Economy Business

Among various circular business models, one of the examples is called LAUNDROOM. It is the first of its kind in the industry designed to realize the sharing of washing machines in shared rental accommodation in Japan*2. The service uses one of our drum-type washer dryers that boasts excellent energy and water-saving capabilities, as well as providing an IoT function that enables users to view the washing machine operating status and to receive a notification upon completion of washing operations. Also, a designated repair contact will quickly respond to unexpected issues. Attention to detailed usability has evolved the service into a total solution that makes using a washing machine in a rental property shared by multiple households more comfortable and convenient. Use of the LAUNDROOM service is widely expanding with multiple real-estate companies adopting it into their shared rental accommodation. Such adoptions include “TOMORE Shinagawa Nakanobu,” the first property of the Co-Living Rental Residence TOMORE service offered by Nomura Real Estate Development Co., Ltd., and “nears Yokohama Hakuraku,”*3 a shared residence operated by Cosmos Initia Co., Ltd., a Daiwa House Group company. LAUNDROOM is also incorporated in “HAUN Ogu” and “HAUN Kuramae”*4 operated by HAUN Co., Ltd., as well as in “TOMORE Tabata,” a second TOMORE property, and in student dormitories.*5



*2 <https://news.panasonic.com/jp/press/jn241112-1>
*3 <https://news.panasonic.com/jp/topics/206603>
*4 <https://news.panasonic.com/jp/press/jn250801-2>
*5 <https://news.panasonic.com/jp/topics/206607>

As part of our “product as a service” businesses, we also offer a rental service for the VIXELL vacuum-insulating cooling boxes that realize the safe and secure transportation of pharmaceuticals as another model for providing cooling value.*6

Biopharmaceuticals such as anticancer drugs and coronavirus vaccines require strict temperature control during storage and transportation. As globalization advances in the pharmaceutical industry, cold-insulating containers are also being used in the import and export of pharmaceuticals. However, efforts to spend the time and money required to recover and reuse the containers have not become sufficiently established and the current situation is that the cold-insulating containers are being thrown away after use. In response to this, as an effort to realize a sustainable society, we started a service in April 2023 where we not only rent out VIXELL boxes as shipping containers, but also collect the VIXELL boxes from the export destinations ourselves, refurbish them, and then rent them out to other customers. This service covers not only exports from Japan, but also from Europe, and we plan to increase the number of regions covered in the future. To go beyond pharmaceutical transportation, we participated in the experimental aerial transportation of frozen sushi from Japan to the U.S. organized by DAY BREAK Co., Ltd., in August 2025. Our VIXELL boxes successfully proved their capability to control temperatures and product quality in refrigerated transportation. This trial result raised expectations for VIXELL’s contribution to forming frozen food cold chains.

In response to customer requests, we began renting VIXELL pallets and VIXELL containers suitable for increased volume of cargo transport in April 2024 and June 2025, respectively*7. VIXELL pallets and VIXELL containers follow the characteristics of the VIXELL box, which are to be robust, lightweight, and stay cool for a long period of time. As a result, they are lighter than conventional containers, which require a power source to keep cool, and we believe they can contribute to reducing CO₂ emissions during transportation. In addition, VIXELL pallets can be used to transport cargo in general transportation trucks containing loads from multiple customers, meaning there is no need to charter a refrigerated vehicle. The width of the pallets is approximately 1,000 mm, making them suitable for standard logistics services within Japan. We believe that they can contribute to solving the logistical problems that started facing Japan due to law changes in 2024.



* 6 <https://www.panasonic.com/jp/business/vixell.html>
* 7 <https://news.panasonic.com/jp/press/jn240306-2>

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In May 2024, the Group launched a Heat Pump Unit Cleaning Service^{*8} for our NA-LX series of drum-type washers and dryers. This service is designed to provide long-term, reliable use of the energy-saving heat pump drying function. The service involves a home visit by a certified technician who has undergone special training, who will thoroughly clean the heat pump unit and drying path using special tools that we have developed. With our unique top unit structure, the heat pump unit is placed on the top of the main body, eliminating the need to move the body of the machine or carry out extensive disassembly, allowing for full-scale cleaning on the spot. This ensures that optimal drying performance continues to be maintained. Through this service, we provide peace of mind that customers can continually use our products comfortably, while providing value that contributes to nature and the environment through long-term use. We will continue to accelerate our efforts to reduce environmental impact.



^{* 8} <https://news.panasonic.com/jp/press/jn240527-2>

In April 2024, we launched a new business offering Panasonic Factory Refresh—certified and guaranteed refurbished products—through both sales and subscription-based services. We refurbish home appliances, such as washing machines, refrigerators, and TVs, and other products across a total of 12 categories, collected after use, to a reusable state for reselling^{*9}. Those products that satisfy the high quality standards set by the Panasonic Group are then made available for sale. For example, TVs are inspected to ensure they do not carry any scratches, damage, or missing parts in the main body and accessories that could cause a malfunction. They are also thoroughly cleaned, and the image quality is checked. Any failed parts are replaced, and all the products are tested for product safety. To meet the Group standards, the display output is adjusted, and performance tests are conducted. Only after all these processes have been completed, the products are finally put on sale for customers.



^{* 9} <https://news.panasonic.com/jp/press/jn250217-1>

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

In June 2022, we launched a modular personal care system^{*10} for the European and North American markets. The initial system comprises a single main unit and five different detachable heads, including trimmers for beards, hair, body hair, and nose hair; a shaver; and a tooth brush. Users can purchase the necessary care parts individually. With the battery and motor being integrated into a single body, the system flexibly adapts to various personal care and grooming needs at home or when traveling for leisure or business. Utilizing a standard design

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



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

^{*10} <https://connect.panasonic.com/jp-ja/products-services/tough/lineup/40-j/extensibility>

Another example among our products featuring modular designs is our TOUGHBOOK, a notebook PC with a particularly robust casing. It offers a variety of modular attachments (sold separately) allowing users a flexible configuration of additional functions. For example, companies can adopt an IC card authorization system for PC usage without replacing their current TOUGHBOOKs—by simply adding optional non-contact IC card readers^{*11}. This modular design not only offers the flexibility for future functional enhancement but also prolongs product life. In case of failure, only the affected component needs to be replaced. This reduces waste and loss, which in turn contributes to reducing environmental impact.



^{*11} <https://connect.panasonic.com/jp-ja/products-services/tough/lineup/40-j/extensibility>

Products that are made using recycled resources are regarded as a part of our circular economy business for their effective utilization of resources. We achieved sustainable body design in the PT-VMZ82 Series projectors by incorporating 59%^{*12} recycled resin in the plastic used in their main units. The recycled resin is used in the outer casing and for some internal structures after assessing material properties and selecting the most suitable parts for this purpose.

Along with ensuring stable quality while using recycled materials, the PT-VMZ82 Series adopts a range of solutions that contribute to reducing environmental impact. Such solutions include a combination of a long-life filter and a highly reliable laser light source, operable for 20,000 hours,^{*12} to minimize maintenance work, operational costs, and waste materials; an energy-saving Auto Power On function; and molded pulp trays for packaging.



^{* 12} <https://connect.panasonic.com/jp-ja/products-services/projector/lineup/vmz82>

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



*13 <https://news.panasonic.com/jp/topics/205760>

As described above, we are working to create circular economy businesses. We are continuing to expand the scale of our circular economy business.

1	S-cubo Cs “food refrigeration” as a service	9	Upcycling of factory waste (reuse for alternative purposes)
2	VIXELL cooling box rental service for pharmaceutical use	10	Adopting non-plastic packaging
3	Akari E Support, LED lighting leasing service	11	Maintenance service for air ventilation systems in road tunnels
4	Battery Life Cycle NAVI, a battery life management service that forms part of the corporate PC subscription service, Slim Work Support	12	Refurbished home appliance products, Panasonic Factory Refresh
5	Renovating existing buildings as a multi-use complex	13	Adopting recycled resin into our own products
6	Market expansion of cellulose-mixed resin “kinari” and adoption into our own products	14	Customizable modular design products
7	Refurbishment of equipment in client stores (China)	15	LAUNDROOM washer-dryer sharing service for rental housing
8	"noiful" home appliance subscription service for rental housing		

Evolution of Recycling-Oriented Manufacturing

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

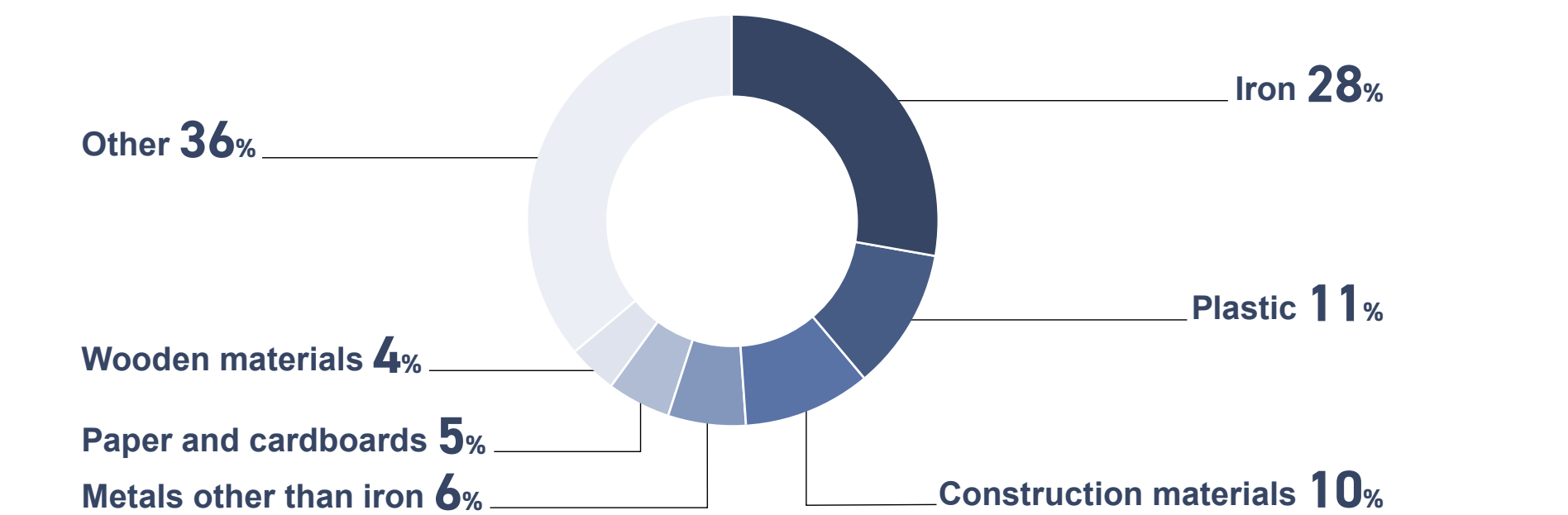
Furthermore, we are clarifying the use of recycled materials by identifying the volume of each type of resources used across the Panasonic Group. For example, , we used 17,100 tons of recycled resin in our products in fiscal 2026. This was achieved by producing resin that has characteristics suitable for its usage purposes, securing stable supply, establishing adaptability in production sites to use the recycled resin, and developing recycling technologies. However, the above efforts did not meet the required level, and therefore we could not attain the GIP2024 target. We plan to accelerate our efforts to address these issues to steadily increase use of

recycled resin. Moreover, we are promoting the development of plant-based resin with lower environmental impact and its application for the products.

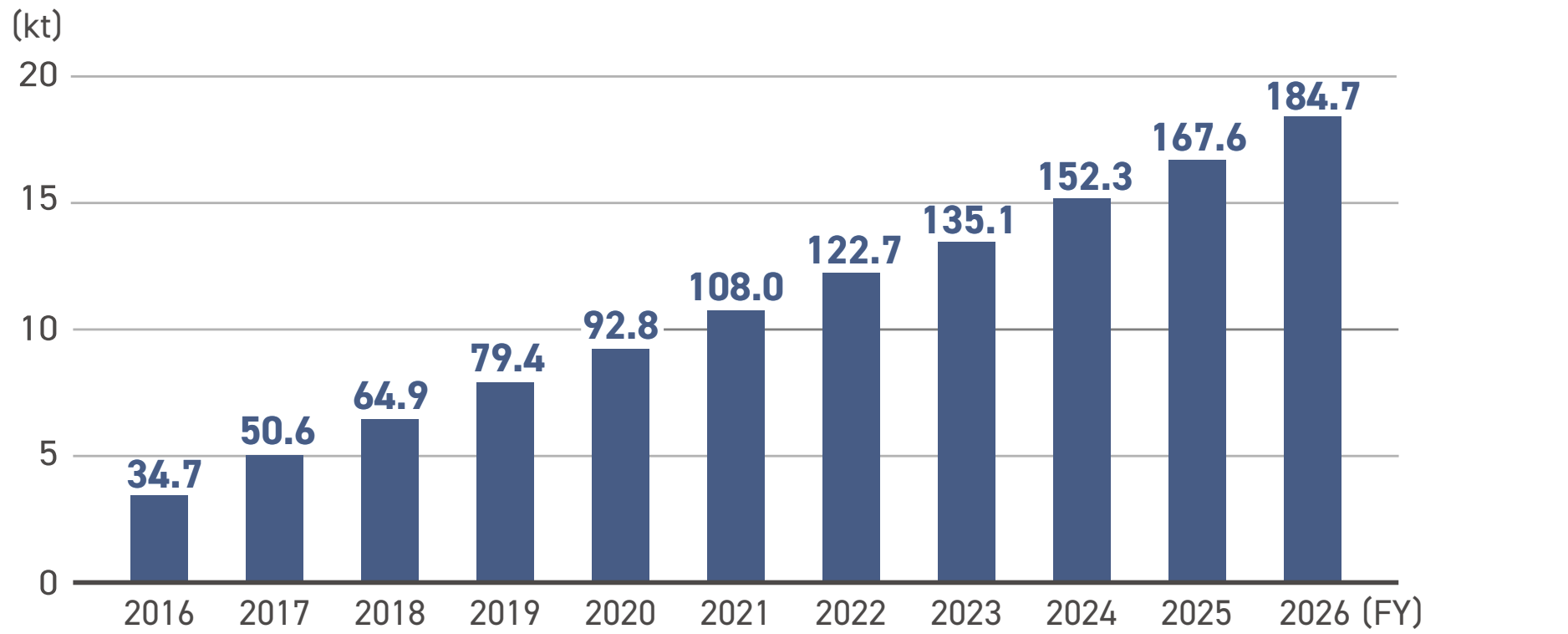
As for the factory waste recycling rate^{*14}, we had traditionally set different targets for Japan and other countries according to the relevant local infrastructures. However, given increased awareness of the importance of zero waste emission activities, we have set a fixed global target since fiscal 2011 and are taking steps to improve the standard level of waste recycling across the entire Group. In recent years, we have been maintaining our factory waste recycling rate at 99% or more. Since this has become part of our operational standard procedures, we have removed thisfigure from our fiscal 2026targets.

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

Breakdown of Total Resources Used in Fiscal 2026 (by category)



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



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■ Reduction in Resources Used

To minimize the use of resources for production, we continuously look to reducing the weight of our products. Through the Product Environmental Assessment (see <https://holdings.panasonic/global/corporate/sustainability/environment/green-products.html>), we have been promoting resource saving from the product planning and design stage, such as using less resources, making our products lighter and smaller, and using less components. We also implement various measures from the standpoint of resource recycling throughout the product life cycle, such as component reuse, longer durability, use of recycled resources, easier battery removal, and labels necessary for collection/recycling. Examples of weight reduction and recyclable product design are also introduced in the following website.

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

■ Use of Sustainable Materials

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

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

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

🔗 Our Approach to Resources Recycling

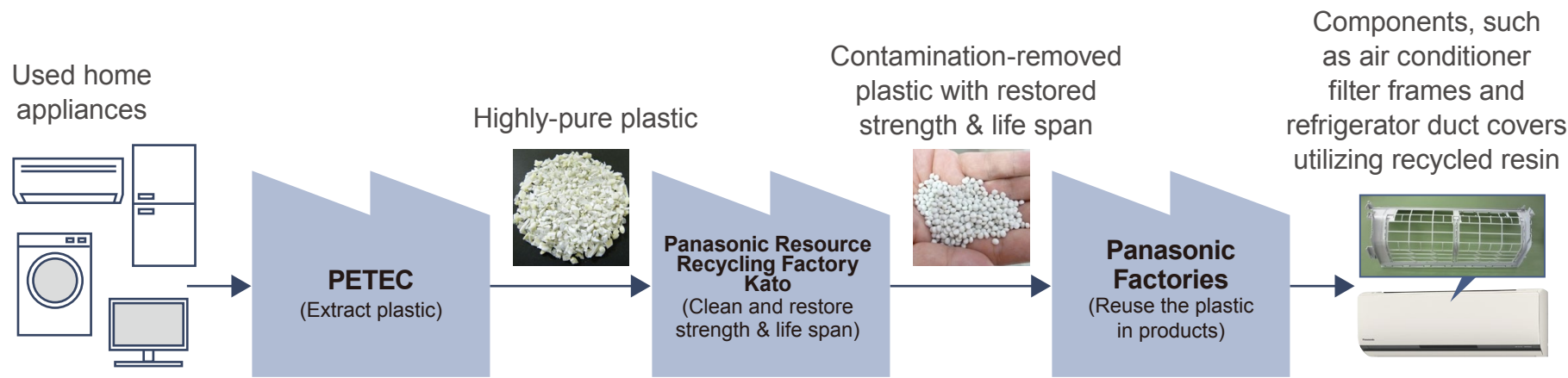
<https://holdings.panasonic/global/corporate/sustainability/environment/resources-recycling.html>

■ Enhanced Use of Recycled Resin

To efficiently utilize resin recovered from used home appliances in addition to metals such as iron, copper, and aluminum, our recycling factories—Panasonic Eco Technology Center Co., Ltd. (PETEC), and Panasonic Resource Recycling Factory Kato (PRRFK)—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 95%.

The recycled single resins sorted and recovered at PETEC are then transferred to the adjacent Panasonic Resource Recycling Factory Kato to be further purified and processed to recover their chemical properties. Panasonic Resource Recycling Factory Kato (PRRFK) is a manufacturing and development site that promotes the use of recycled resin in home appliance manufacturing and sales. 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.



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

Due to the differences in the physical properties required by different products, we have been examining the properties of recycled polypropylene, polystyrene and acrylonitrile butadiene styrene, and have developed technologies to create new formulas for resin components, adding our own proprietary antioxidant and mixing recycled resin with new resin. To increase usage of recycled plastic across Panasonic Group, we plan to find recycled plastic suppliers based on the recycled plastic development and quality assessment techniques cultivated in our Panasonic Resource Recycling Factory Kato.

Development and Use of New Sustainable Materials

Cellulose fiber, contained in plant-based wastes such as used paper and wood chips, has become a focus of attention as a resource with low environmental impact. In fiscal 2016, we commenced research and development to reduce the use of fossil-based resin by utilizing cellulose fiber. In fiscal 2019, we successfully produced an easy-to-process molding material with less resin by mixing cellulose fiber at a high concentration level into the resin. This material was launched under the brand name of “kinari,” followed by kinari55-PP^{*15} with 55% cellulose

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fiber content in 2022, and kinari70-PP^{*16} with 70% content (biomass rate) in 2024. Further, we started sample sales of kinari90 in the same year.^{*17} kinari90 boasts a 90% biomass rate by combining biomass polyethylene (at 90% or more biomass rate) produced from the sugarcane pulp (bagasse) left after the juice is extracted, while maintaining a physical strength equivalent to that of conventional resin.

kinari has now been adopted in the S-story pendant lamp shade produced by Panasonic Electric Works Co., Ltd. With the plant fiber content representing approximately 50% of the weight of the shade, we successfully reduced the usage of fossil-based resin by half.^{*18} Despite being mass produced, each lamp shade offers varying impressions by incorporating different marble patterns created when molding the shade as a part of the lamp design. When the lamp is turned on, the light gently diffuses through the shade creating a relaxing atmosphere in the room. Further, the changing colors of the shade and wooden fragrance gives the impression that the product matures over time.



We are also working to expand the application of kinari by reinforcing its material strength. We have successfully produced a low-density cellulose fiber molding material that demonstrates a strength equivalent to PBT-GF30% (polybutylene terephthalate with 30% glass fiber) at 80°C utilizing our newly developed engineering plastics compounding technology.^{*19} Aiming at complete biodegradation of the above materials, we also developed a soil-biodegradable version in fiscal 2023 by mixing in plant-derived resins, such as polylactic acid.^{*20}

Relating to “kinari” production, we are reinforcing relationships with local communities to utilize their regional resources under collaboration. Among these collaborative projects, we concluded an agreement with Fukuchiyama City, Kyoto Prefecture, to use their timber from forest thinning. We also jointly commercialized our eco-friendly tableware using this timber. On September 4, 2023, all 23 municipal primary schools and junior high schools in Fukuchiyama City started using some 6,700 sets of this tableware for their school lunches. At the same time, all these schools started an environmental education program in which we cooperated by providing the program contents. Another collaboration with a local company took place in Okinawa Prefecture. Together with Food Reborn Co., Ltd., in 2024 we developed a kinari tumbler utilizing pulp from Okinawan pineapple leaves^{*21, *22}.

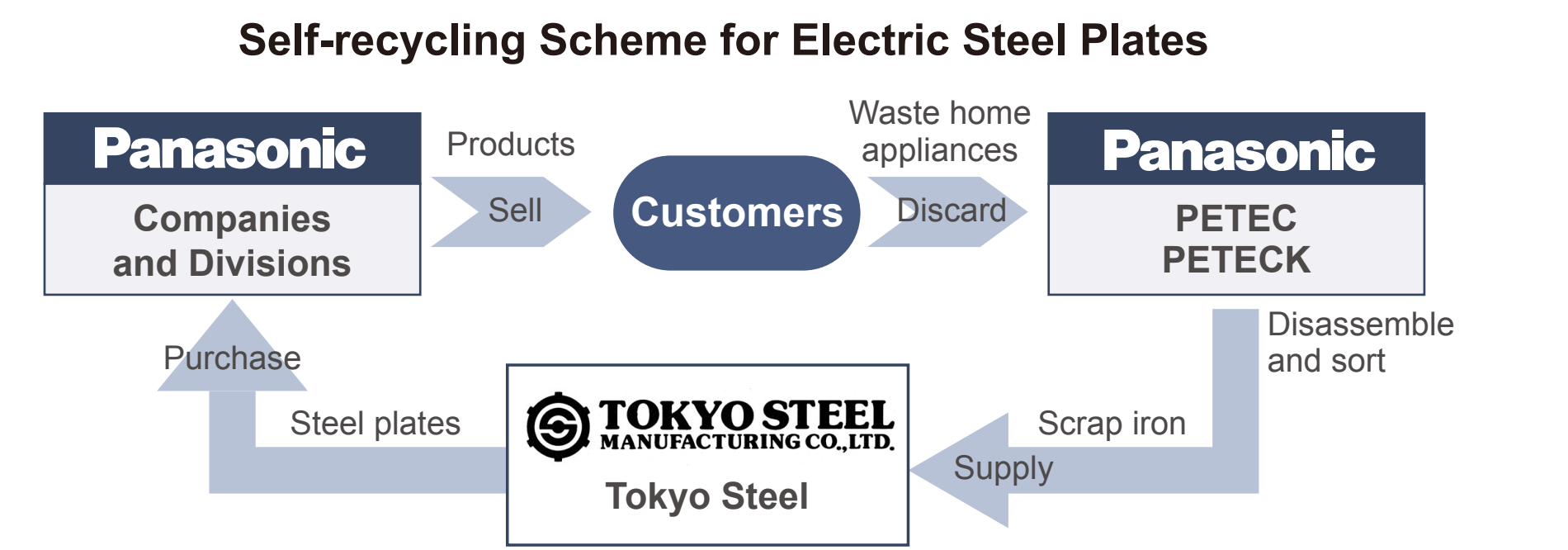
Such efforts relating to our kinari resin have earned a high social reputation and resulted in a number of awards, including the MEXT Minister’s Prize under the FY2021 50th Japan Industrial Grand Prize held by Nikkan Kogyo Shimbun, Ltd., and the Contribution Prize under the 57th Ichimura Industrial Awards, hosted by the Ichimura Foundation for New Technology in April 2025^{*23}.

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

^{*15} See <https://news.panasonic.com/jp/press/jn190708-1>
^{*16} See <https://news.panasonic.com/jp/press/jn210204-1>
^{*17} See <https://news.panasonic.com/jp/press/jn220318-2>
^{*18} See <https://news.panasonic.com/jp/press/jn260306-1>
^{*19} See <https://news.panasonic.com/jp/press/jn250515-2>
^{*20} See <https://news.panasonic.com/jp/press/jn221206-1>
^{*21} See <https://news.panasonic.com/jp/press/jn230825-2>
^{*22} See <https://www.city.fukuchiyama.lg.jp/site/kyouiku/59063.html>
^{*23} See <https://news.panasonic.com/jp/press/jn250421-2>

Building a Recycling Scheme for Scrap Iron

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



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^{*24}. We procure the recycled steel plates and utilize them in products.

Discussions with Tokyo Steel commenced, and we have worked together since then to improve the quality of recycled iron to a level sufficient for production use, as well as developing the technology to improve the applicability of the recycled iron. From this we identified the optimum application of the electrical steel plates, and refined its specific features (e.g. shape, strength, and weldability) to meet application-specific requirements. The use of thin electrical steel plates in our products was first made possible. Through this close collaboration, we materialized this recycling scheme, a scheme where a home appliance recycling company that we own supplies scrap iron to be used to make electrical steel plates. The amount of scrap iron we initially supplied to Tokyo Steel was about 50 t per month. In fiscal 2026, it reached over 1,300 tons per

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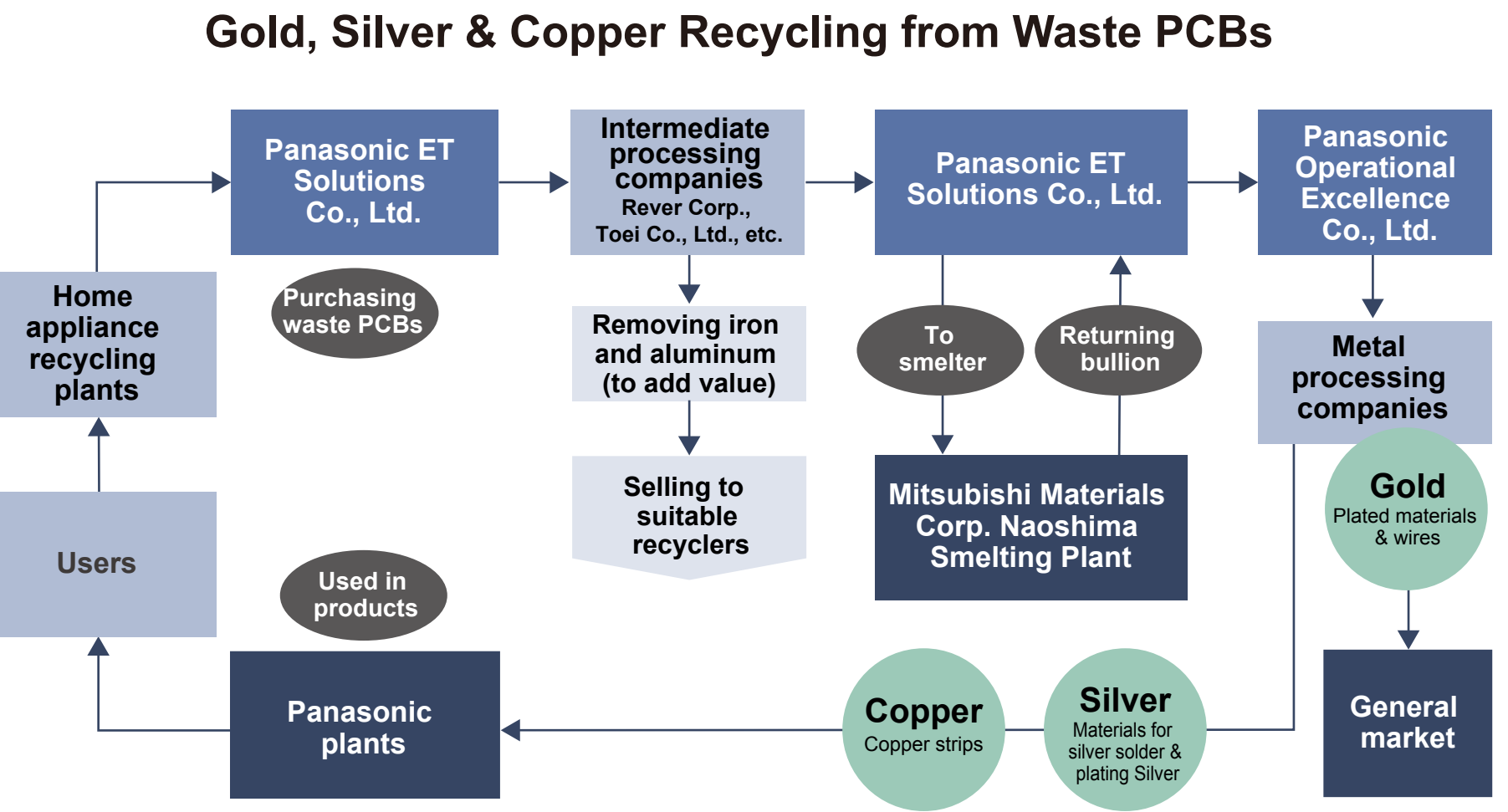
year, and the recycled steel is being used in our Group products, including washing machines and ceiling materials for housing.

Beyond used products, we also recycle waste generated from factories. In Panasonic Electric Works Co., Ltd. Niigata Plant, we supply iron scrap generated during production to an electric arc furnace manufacture and utilize the iron recycled by the manufacturer in some of the products made in the plant^{*25}. This trial of making iron from scrap supplied by our plant and then utilizing the recycled iron in the same plant is the first of its kind within the Panasonic Group. Concretely, we utilize hot-dip galvanized steel sheets in our light fitting components. We started using it for general processing in fiscal 2024 and for spinning/deep drawing processing in fiscal 2027. We also started using painted hot-dip galvanized steel sheets in the main body of lighting equipment in fiscal 2027. The introduction of such materials in mass production is the first of its kind in the lighting industry. We are also running a similar scheme for resin.

^{*24} Steel produced from scrap iron melted and refined in an electric arc furnace.
^{*25} See <https://www2.panasonic.biz/jp/lighting/facilities/baselight/id/environment/>

Gold, Silver, and Copper Recycling from Waste PCBs

The Panasonic Group is running the Product-Material-Product (PMP) Loop scheme together with Mitsubishi Materials Corporation. In this scheme, gold, silver, and copper are extracted from waste printed circuit boards (PCBs) formerly installed in our home appliances, and reused within and outside the Panasonic Group^{*26}.



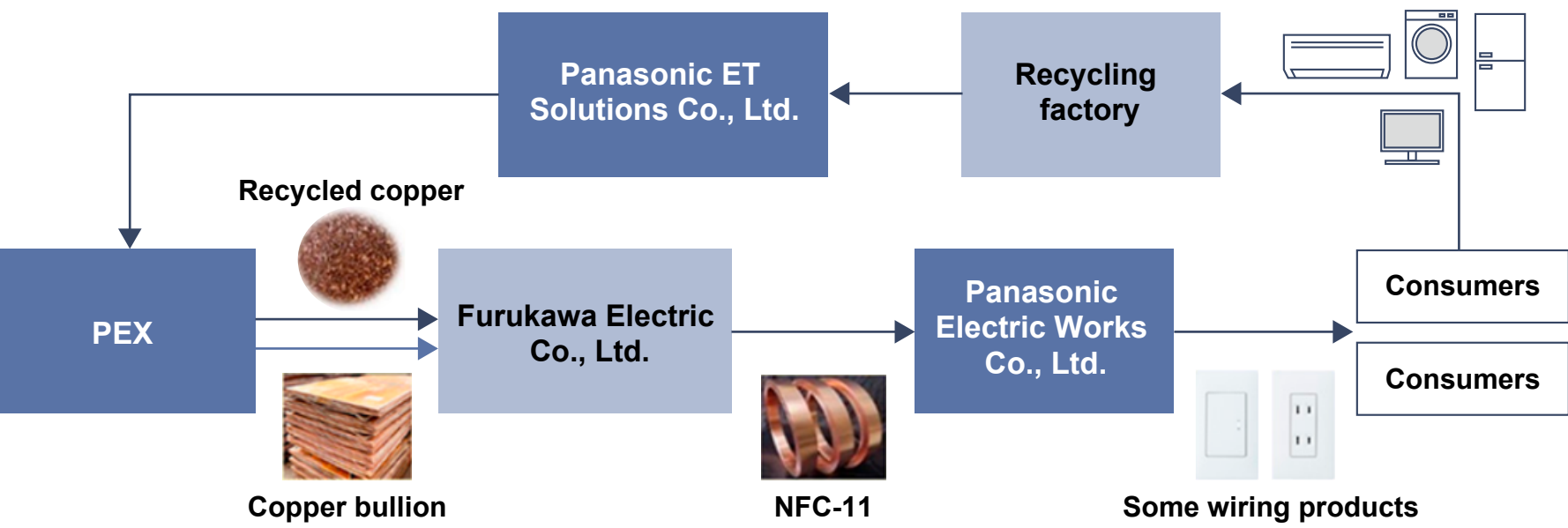
The scheme works as follows: One of our group companies, Panasonic ET Solutions Co., Ltd. (PETS), recovers waste PCBs from home appliance recycling plants and repair sites

across Japan, and commissions initial waste processing to our recycling partner companies. The recycling companies remove the iron and aluminum during shredding and smelting to improve the quality of waste PCB materials. The processed PCBs are then passed to Mitsubishi Materials. Mitsubishi Materials extracts gold, silver, and copper from the waste PCBs through smelting and returns the materials to PETS. The recovered gold, silver, and copper are made into gold plating solution, copper wire, etc. to be utilized in our products again. Total amounts of recovered metals from the waste PCBs through the PMP Loop scheme to date have reached 1.2 tons of gold, 35 tons of silver, and 8,700 tons of copper^{*27}.

^{*26} See <https://news.panasonic.com/jp/press/jn250117-4>
^{*27} Based on the research of our Group and Mitsubishi Materials Corporation as of December 2025.

Building a Recycling Scheme for Copper from Waste Home Appliances

Together with Furukawa Electric Co., Ltd., Panasonic Operational Excellence Co., Ltd. (PEX) has newly established a copper recycling scheme. This scheme replaces some of the copper bullion used by Furukawa Electric to produce copper alloy materials for Panasonic Group products with recycled copper derived from our waste home appliances. The operation commenced in June 2025^{*28}.



Panasonic ET Solutions Co., Ltd. extracts high quality copper with less impurities through its improved refining process from materials selected after disassembly in our recycling factory. The recycled copper is then provided to Furukawa Electric directly through the PEX Procurement Sector, without being returned to a copper refiner. Furukawa Electric has created conditions that enable production of copper alloy for wiring with stable properties even when partially using recycled copper. This scheme resulted in an 8% reduction in CO₂ emissions in Furukawa Electric's copper alloy production.

We plan to apply this know-how in recycled copper use to other Panasonic Group products to further reduce our environmental impact.

^{*28} https://news.panasonic.com/uploads/tmg_block_page_image/file/32764/jn250519-2-1.pdf

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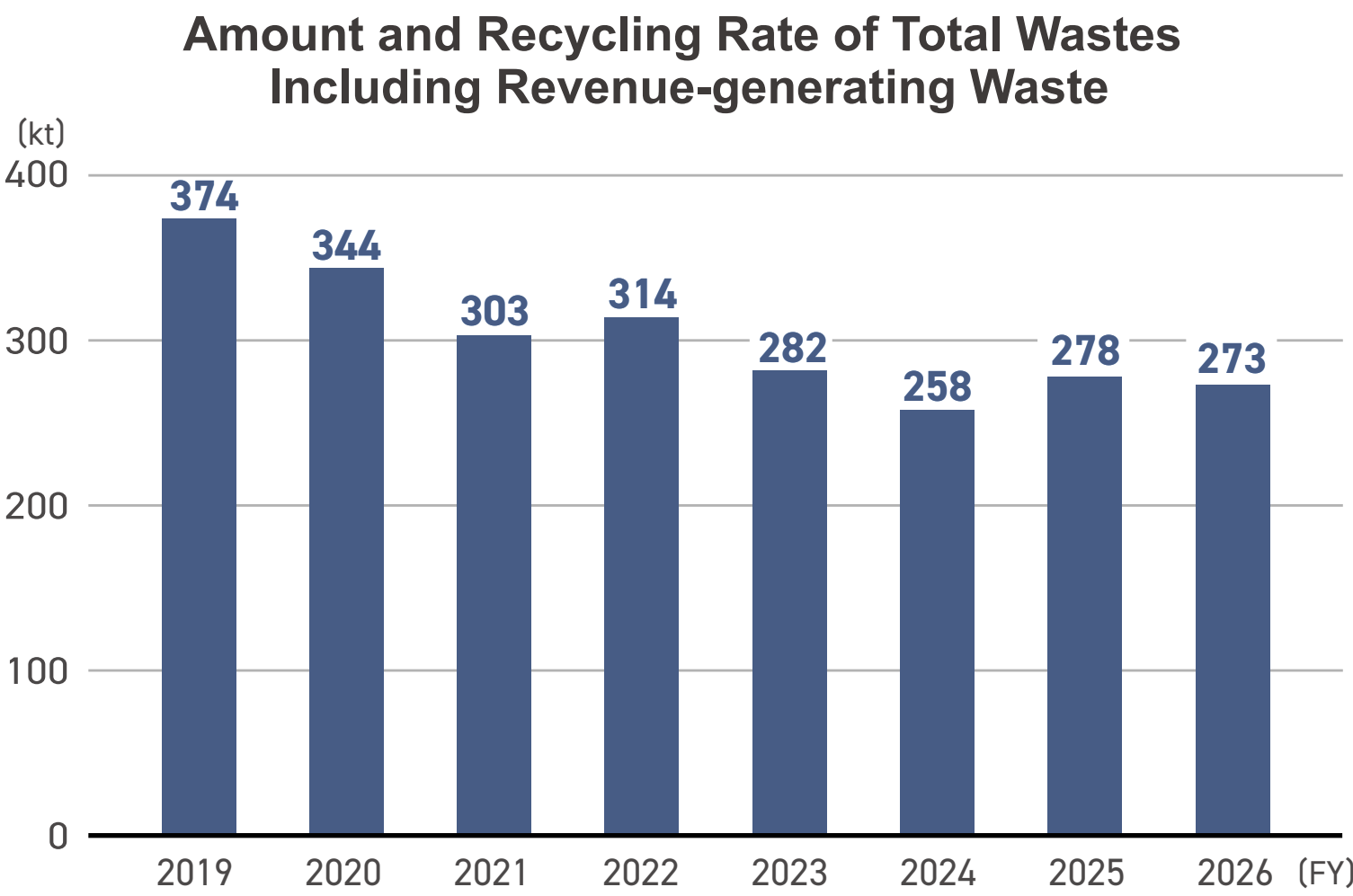
Other Initiatives

Promoting Zero Waste Emissions

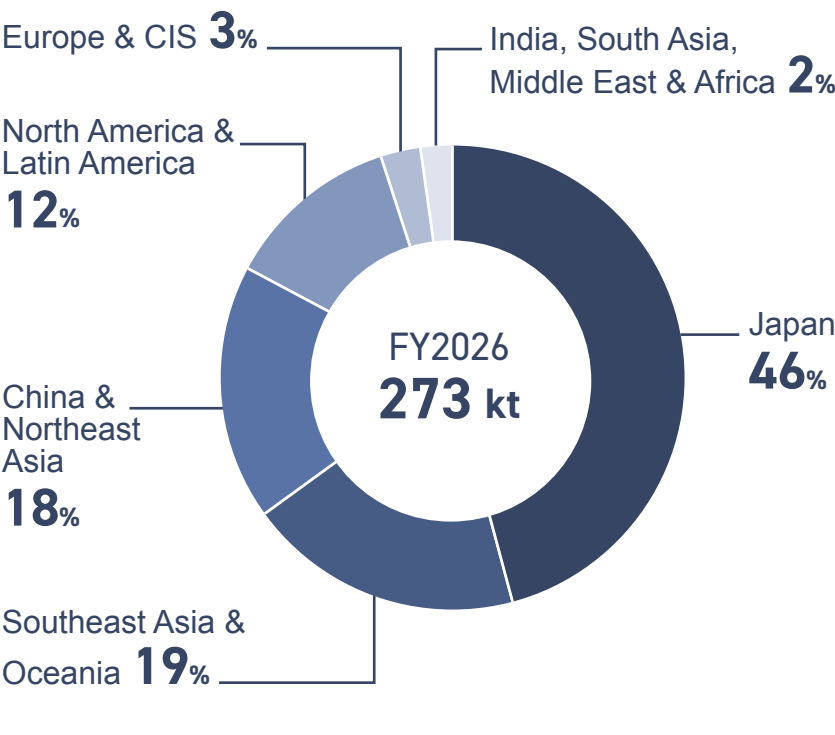
From the viewpoint of effective usage of resources, we believe that generation of waste and revenue-generating waste at factories must be minimized, even if such waste could be sold as valuable commodities. Based on this belief, we identify the amount of generated waste (including both revenue-generating 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) and (2) landfill (waste with no option other than being sent to landfills). In our production processes, we have been working to reduce the waste shipped to landfill to nearly zero, particularly through increasing the use of resources recycled. As a result, we have been maintaining a high factory waste recycling rate of more than 99% already for many years and, therefore, have removed this figure from our fiscal 2026 targets.

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. In addition to accelerating the information sharing on waste recycling issues between our overseas 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^{*29} prepared by each region, following our long-standing approach toward CO₂ reduction activities.

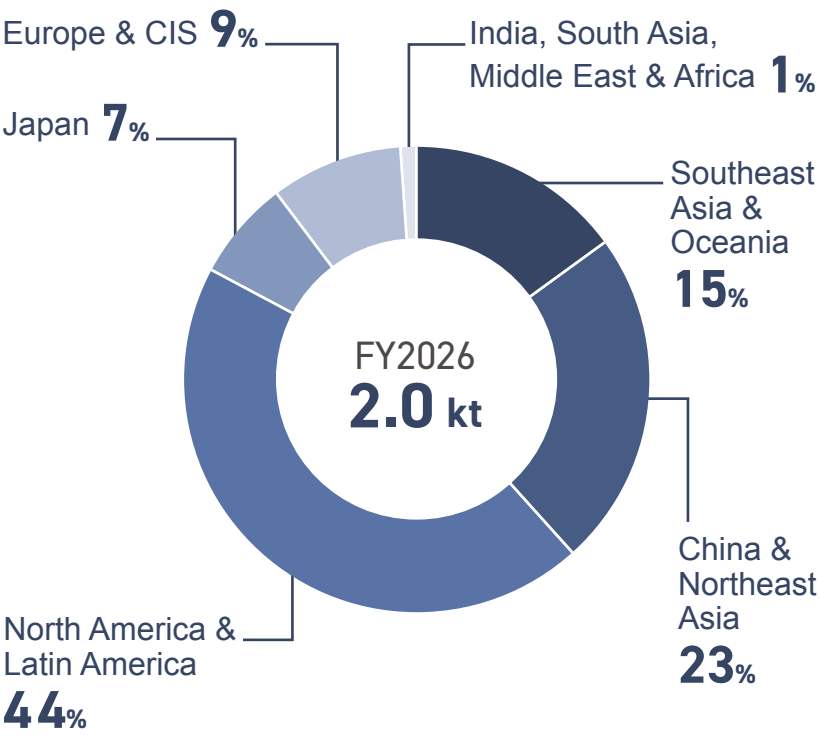
^{*29} A chart-format summary of comparisons between “before and after” implementation of waste reduction and recycling measures.



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 2026 (by category)

Items	Total wastes	Recycled	Landfill
Metal scrap	121	120	0.06
Paper scrap	28	27	0.2
Plastics	32	30	0.6
Acids	21	17	0.1
Sludge	9	8	0.6
Wood	25	25	0.02
Glass/ceramics	3	3	0.03
Oil	10	9	0.06
Alkalis	18	16	0.03
Other ^{*30}	7	6	0.3
Total	273	261	2.0

^{*30} Combustion residue, fiber scraps, animal residue, rubber scraps, debris, ash particles, items treated for disposal, slag, infectious waste, polychlorinated biphenyls (PCBs), waste asbestos.

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The scope of calculation is the same as the scope of reporting as described in ■ Data (page 1).

Where the two scopes do not match is indicated with a note.

■ Breakdown of Energy Consumption (D1)

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Energy		4.5 TWh	4.5 TWh	4.5 TWh ☒	Sum of (Energy consumption) in each site (respective energy consumption below) *D1-1
	Purchased electricity	3.08 TWh	3.07 TWh	3.07 TWh	a1) Sum of (Purchased general electricity consumption) in each site *D1-2
	including renewable energy	0.72 TWh	0.95 TWh	1.08 TWh ☒	a2) Sum of (100% Renewable energy-sourced electricity consumption out of Purchased general electricity consumption) in each site *D1-3, D1-4, D1-5
	On-site renewable energy generation (self-consumed)	0.07 TWh	0.11 TWh	0.14 TWh ☒	a3) Sum of (Volume of self-consumption out of self-produced renewable energy) in each site
	City gas	68 million m³	70 million m³	66 million m³	Sum of (City gas consumption) in each site
	LNG	9.9 kt	10.8 kt	10.9 kt	Sum of (LNG consumption) in each site
	LPG	4.5 kt	4.4 kt	4.3 kt	Sum of (LPG consumption) in each site
	Heavy oil	7.0 MI	6.2 MI	5.5 MI	Sum of (Heavy oil consumption) in each site
	Light oil	1.9 MI	2.0 MI	1.9 MI	Sum of (Light oil consumption) in each site
	Kerosene	1.6 MI	1.6 MI	1.7 MI	Sum of (Kerosene consumption) in each site
	Gasoline	0.1 MI	0.1 MI	0.1 MI	Sum of (Gasoline consumption) in each site
	Steam	373 TJ	336 TJ	340 TJ	Sum of (Consumed steam procured from a third party) in each site
	Hot Water	37 TJ	37 TJ	42 TJ	Sum of (Consumed hot water procured from a third party) in each site

*D1-1: Electricity is calculated in kWh. Fuel is converted to a unit of electrical energy, which is 1 kWh = 3.6 MJ. The figures are then combined.

*D1-2: The calculation includes all electricity service plans.

*D1-3: The calculation includes offsite renewable PPA (solar, onshore wind, geothermal) procurement.

*D1-4: 100% renewable energy-sourced electricity includes deemed 100% renewable energy contracts that use a renewable energy certificate.

*D1-5: Electricity certificates such as Non-Fossil Certificates (NFC), International RECs (I-REC) and Green Electricity Certificates (GEC) are used.

■ Breakdown of GHG Emissions (Scopes 1 and 2): From Energy Sources, From Non-Energy Sources, and Carbon Offset by Credits (D2)

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.	
Scope 1			317 kt	272 kt	242 kt	b)+c)
	GHG emissions from energy sources		216 kt	220 kt	201 kt ☒	b) Sum of (GHG emissions derived from fuel consumption) in each site ^{*D2-1, D2-2}
	GHG emissions from non-energy sources		101 kt	53 kt	41 kt ☒	c) Sum of (GHG emissions other than CO ₂ emissions derived from fuel consumption) in each site ^{*D2-3, D2-4}
	(Breakdown)	CO ₂	1 kt	1 kt	1 kt	—
		HFC	97 kt	50 kt	38 kt	—
		SF ₆	2 kt	2 kt	2 kt	—
		NF ₃ and others	1 kt	1 kt	1 kt	—
Scope 2 from energy sources (Market-based)		1,207 kt	1,099 kt	994 kt ☒	d) Sum of (Purchased volume of electricity and heat) in each site x (CO ₂ emission factor) ^{*D2-1, D2-2, D2-5, D2-6}	
Total of Scope 1 and 2		1,523 kt	1,370 kt	1,235 kt	e) = b)+c)+d)	
Carbon offset by credits		-57 kt	-79 kt	-92 kt	f) Sum of (GHG offset volume by carbon credit retirement) in each site ^{*D2-7}	
The amount subtracting carbon offset by CO ₂ credits from the total of Scope 1 and 2 emissions		1,465 kt	1,291 kt	1,142 kt ☒	b)+c)+d)+f)	

*D2-1: (Respective energy consumption) x (CO₂ emission factor per energy)

*D2-2: For all global regions we used emission factors based on GHG Emissions Accounting and Reporting Manual (Ver. 5.0) by MOE.
For city gas, we used emission factors published by gas suppliers. Where necessary, we used replacement figures based on Emission Factors per Gas Supplier - FY2026 Supply Results by MOE. In China, we used a steam emission factor based on GB/T 32150-2025 General Guidelines of the Greenhouse Gas Emissions Accounting and Reporting for Industrial Enterprises.

*D2-3: Scope of GHGs and Global Warming Potentials (GWPs) used to determine CO₂ emissions were based on the Order for Partial Revision of the Order for Enforcement of the Act on Promotion of Global Warming Countermeasures (Cabinet Order No. 20 of 2026).

*D2-4: GHG emissions other than CO₂ emissions from energy sources were calculated for manufacturing sites only (non-manufacturing sites were excluded), excluding results from 10 manufacturing sites under Panasonic HVAC & CC.

*D2-5: A unit of electrical energy was used for electricity. Emission factors for each country were set by the Panasonic Group based on factors listed in CO₂ Emissions from Fuel Combustion published by the International Energy Agency (IEA). For fiscal 2026, IEA Emissions Factors 2025 was used. For purchased electricity in Japan in fiscal 2026, we used Emission Factors per Electric Utility - FY2026 Supply Results by MOE.

*D2-6: Heat includes steam and hot water.

*D2-7: Carbon credits based on the certification system such as J-Credits, Verified Carbon Standard (VCS), and Clean Development Mechanism (CDM) are used.

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■ Breakdown of GHG Emissions (Scopes 1 and 2): By Global Regions (D3)

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Total of Scope 1 and 2 (By region)		1,523 kt	1,370 kt	1,235 kt	e) in Table D2
	Japan	617 kt	570 kt	515 kt	Breakdown of Japan
	China and Northeast Asia	244 kt	232 kt	240 kt	Breakdown of China and Northeast Asia region
	Southeast Asia and Pacific	413 kt	329 kt	211 kt	Breakdown of Southeast Asia and Pacific region
	North America and Latin America	194 kt	184 kt	218 kt	Breakdown of North America and Latin America region
	India, South Asia, Middle East and Africa	42 kt	44 kt	41 kt	Breakdown of India, South Asia, Middle East and Africa region
	Europe and CIS	13 kt	11 kt	11 kt	Breakdown of Europe and CIS region

■ CO₂ Emissions Intensity (Compared to Fiscal 2014) (D4)

	FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
CO ₂ emissions intensity improvement rate (Compared to fiscal 2014)	37	34	33	Emissions intensity (Compared to fiscal 2014) (= Intensity improvement rate) was calculated as follows: ^{*D4-1, D4-2} FY2025 intensity improvement rate (%) = A2014×A2015×A2016×A2017×A2018×A2019×A2020×A2021×A2022×A2023×A2024 $An = \frac{(\text{Group CO}_2 \text{ emissions in fiscal } n / \text{Group sales in fiscal } n)}{(\text{Group CO}_2 \text{ emissions in fiscal } n-1 / \text{Group sales in fiscal } n-1)}$ n = 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024 FY2014 emissions are set to 100.

^{*D4-1}: CO₂ emissions in the numerator of emissions intensity was changed to calculate by e) in fiscal 2026.
^{*D4-2}: Sales in the denominator of emissions intensity is the figure reported in the Annual Securities Report.

■ Breakdown of GHG Emissions (by scope, by category) (D5)

^{*See} [Page 17](#)

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Scope 1		317 kt	272 kt	242 kt	b)+c) in Table D2
Scope 2		1,207 kt	1,099 kt	994 kt	d) in Table D2
Scope 3		124,995 kt	144,246 kt	139,226 kt	Sum of CO ₂ emissions from all categories in Scope 3
	1. Purchased goods and services	21,954 kt	20,324 kt	19,001 kt	Sum of (External purchase figure per material in previous FY) x (monetary CO ₂ emission intensity per material) ^{D5-1}
	2. Capital goods	1,546 kt	2,030 kt	1,617 kt	Sum of (Capital investment per segment) x (CO ₂ emissions intensity) ^{D5-2}
	3. Fuel- and Energy-Related Activities Not Included in Scope 1 or Scope 2	243 kt	251 kt	265 kt	(Amount of purchased electricity + Amount of energy used) x (CO ₂ emission factor per electricity and energy)
	4. Upstream transportation and distribution	741 kt	720 kt	778kt	(Cargo t-km) x (CO ₂ emissions intensity per weight) and (Transportation costs) x (CO ₂ emissions intensity per transportation costs)
	5. Waste Generated in Operations	1 kt	1 kt	1 kt	Sum of (Landfill volume per waste type) x (CO ₂ emissions intensity per waste type)
	6. Business travel	31 kt	30 kt	27 kt	(Number of employees) x (CO ₂ emissions intensity per industry specified by MOE) ^{D5-2}
	7. Employee commuting	107 kt	106 kt	95 kt	(Number of employees) x (CO ₂ emissions intensity per industry specified by MOE) x (Working days) ^{D5-2}
	8. Upstream leased assets	—	—	—	Out of scope
	9. Downstream transportation and distribution	146 kt	147 kt	253 kt	{{(Total weight of all global products) x {Sum of (Travel distance by trucks and pickup trucks) x (CO ₂ emissions intensity of trucks and pickup trucks)}}
	10. Processing of sold products	234 kt	170 kt	115 kt	(Emissions from processing sold products) = (Emissions after delivering in-vehicle components) = (Emissions per sales unit of assembly business) x (Sales of component business)
	11. Use of sold products	91,027 kt	111,151 kt	108,900 kt ☒	Sum of the following ① and ② calculated for each major product group ^{D5-3} ① CO ₂ emissions from energy consumption: (Annual electricity or fuel consumption per product) x (Product life ^{D5-4}) x (CO ₂ emissions in the region where the product is used) x (Annual unit sales) ② Refrigerant leakage during product usage: (Volume of refrigerant filled per product) x (Annual leakage rate) x (Product life ^{D5-4}) x (Global warming factor ^{D5-6}) x (Annual sales units)
	12. End-of-life treatment of sold products	7,860 kt	7,999 kt	6,921 kt	Sum of ① and ② below ① Refrigerant non-disposal part: (Total weight of all global products) x (CO ₂ emissions intensity per industry specified by MOE) ② Refrigerant to be disposed: (Volume of refrigerant filled per product) x (1- Collection rate) x (Global warming factor ^{D5-6}) x (Annual sales units)
	13. Downstream leased assets	—	—	—	Out of scope
	14. Franchises	—	—	—	Out of scope
	15. Investments	1,108 kt	1,322 kt	1,256 kt	(Equity ratio to an equity method affiliate) x (Sales of the affiliate) x (CO ₂ emissions intensity of the affiliate businesses) ^{D5-7}
Total		126,518 kt	145,616 kt	140,461 kt	Total of CO ₂ emissions from Scopes 1, 2, and 3

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*D5-1: Emissions Intensity Database for Calculating Greenhouse Gas Emissions of Organizations through Supply Chains (Ver. 3.6) by MOE
*D5-2: Emissions Intensity Database for Calculating Greenhouse Gas Emissions of Organizations through Supply Chains (Ver. 3.5) by MOE
*D5-3: Major product groups with high energy consumption or high refrigerant leakage: Lighting equipment and lamps, Household air conditioners, commercial air conditioners, household refrigerators, washing and drying machines, ventilation fans, bathroom ventilation dryers, electric water heaters, electric fans, A2W (Hot-Water and Heating Systems with Heat Pump), EcoCute, electronic rice cookers, dish washer and dryers, LCD TVs, Organic EL TVs, microwave ovens, heat exchange systems, blowers, chip mounters, refrigerated display cases for stores, hair dryers, IH cooking heaters, dehumidifiers, range hoods, vacuum cleaners, irons, electric thermos pots, projectors, digital signage, welding machine, welding robot, insertion equipment, printing equipment, mobile computer, electric bidet toilet seats, freezers, commercial refrigerators and freezers, absorption freezers, well water pumps, telephones, air purifiers, humidifiers, electrically-assisted bicycle, motors for air conditioning, motors for refrigerator, motors for FA application, etc. 60 products.
*D5-4: Spare parts warranty period and design lifetime, etc.
*D5-5: Electric power CO₂ emission factor: 0.449 (Japan); 0.254 (Europe); 0.331 (North America); 0.59 (China and Northeast Asia); 0.748 (India); 0.378 (Southeast Asia and Pacific); 0.244 (Latin America); and 0.597 (Middle East and Africa). CO₂ emission factor in each region is based on IEA Emissions Factors 2025 published by the International Energy Agency (IEA). Fuel-related CO₂ emission factor is based on "Manual for Calculating and Reporting Greenhouse Gas Emissions, Ver. 5.0 by the Ministry of the Environment (MOE)". (Global)
*D5-6: CO₂ emissions were calculated using the global warming potential specified in the Order for Partial Revision of the Order for Enforcement of the Act on Promotion of Global Warming Countermeasures (Cabinet Order No. 20 of 2026).
*D5-7: See IDEA Ver.3.5 (IPCC 2021 without LULUCF AR6) by the National Institute of Advanced Industrial Science and Technology (AIST).

■ Avoided CO₂ Emissions (D6) *See [Page 18](#)

	FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Avoided CO ₂ emissions for society	36,971 kt	53,253 kt	48,467 kt ☒	Sum of avoided emissions per product group, calculated according to our own avoided-emissions categories ① to ④. See page 18 for details of categorization. ① Electrification: Difference in CO ₂ emissions between fossil-fuel-driven products and our electrical products that deliver the equivalent effects. {(Lifetime CO ₂ emissions per fossil-fuel-driven product) – (Lifetime CO ₂ emissions per our electrical product)} x (Annual sales units) ② Replacement: Difference in CO ₂ emissions between old and new electrical products that deliver the equivalent effects (Lifetime CO ₂ emissions from an existing product on the market – Lifetime CO ₂ emissions from our product) x (Annual sales units) ③ Solution: Difference in CO ₂ emissions between the case when our product or service is introduced and when it is not. (CO ₂ emissions reduced over the lifetime by introduction of our product or service) x (Annual sales units) ④ Others: Difference in CO ₂ emissions between the case when our product or service is introduced and when it is not. (CO ₂ emissions reduced over the lifetime by introduction of our product or service) x (Annual sales units)
Number of products subject to calculation	56	61	43	

*D6-1: Five products such as Cylindrical Lithium-ion Batteries for In-vehicle, Hot-Water and Heating Systems with Heat Pump (A2W), Electrically-assisted Bikes.
*D6-2: 20 products such as DC fan motor for air conditioner, lighting equipment, household air conditioners, commercial air conditioners, household refrigerators, etc.
*D6-3: Six products such as distributed storage battery system for data centers, heat exchange system, BEMS/HEMS, etc.
*D6-4: 12 products such as photovoltaic power generation systems, fuel cells, Genelink absorption chiller system, home delivery smart box, etc.

■ GHG Emissions Reduction Targets (SBT 1.5°C Accreditation) (D7) *See [Page 29](#)

	FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Emissions from Panasonic Group business activities (Scopes 1 and 2)	38%	45%	52%	Reduce by 90% by 2030 (compared to FY2020) FY2020: 2,311 kt
Emissions from use of Panasonic Group products (Scope 3)	— ^{*D7-1}	— ^{*D7-1}	— ^{*D7-1}	Reduce by 30% by 2030 (compared to FY2020) FY2020: 95,040 kt

*D7-1 Progress rate not calculated, as emissions increased due to the expanded scope of calculation.

■ Renewable energy rate of electric power (D8) *See [Page 37](#)

	FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Renewable energy rate of electric power	24.3%	32.5%	37.2%	{ a2)+a3}}/{a1)+a3}}

■ Net-zero CO₂ Emission Factories (D9) *See [Page 36](#)

	FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
The amount subtracting carbon offset by credits from the total of Scope 1 and 2 emissions (Excluded non-energy sources)	1,365 kt	1,238 kt	1,101 kt	b)+d)+f) in Table D2
Number of Net-zero CO ₂ emission factories	44	45	60 ^{*D9-1}	Number of sites where b) + d) + f) = 0 in table D2. (As of March 31, 2026)

*D9-1: Number of sites assessed under the rules applicable before the change to the application of green electricity certificates in China—a change introduced by the Implementation Rules for the Management of Renewable Energy Green Electricity Certificates (Trial) enforced in November 2025. Reflecting this rule change, the number of sites would be 46 ☒.

■ Scope 2 GHG Emissions from Energy Sources (Location-based) (D10)

	FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Scope 2 Energy sources (Location-based)	—	—	1,500 kt ☒	Sum of (Purchased volume of electricity and heat) in each site x (CO ₂ emission factor) ^{*D10-1}

*D10-1: A unit of electrical energy was used for electricity. Emission factors for each country were set by the Group based on factors listed in CO₂ Emissions from Fuel Combustion published by the International Energy Agency (IEA). For fiscal 2026, IEA Emissions Factors 2025 was used.

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Logistics (D11)

*See <https://holdings.panasonic/global/corporate/sustainability/environment/logistics.html>

			FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Energy			1.32 TWh	1.31 TWh	2.34 TWh	[Japan] Energy usage [GJ]* ^{D11-1, D11-1} • Excludes some organizations • Truck 1. Truck fuel method: (Fuel usage [kl]) x (Calorific value per unit [GJ / kl]) 2. Truck fuel consumption method: (Fuel usage [kl] = {Transportation distance [km] / Fuel consumption [km/l] x 1/1000 (kl/l)}) x (Calorific value per unit [GJ/kl]) 3. Improved truck ton-kilometer method: (Cargo volume [t-km]) x (Revised t-km-based fuel use intensity [l/t-km]) x 1/1000 (kl/l) x (Calorific value per unit [GJ/kl]) • Rail, sea, and air Conventional ton-kilometer method: (Cargo volume [t-km]) x (Energy use intensity [ML/t-km]) × 1/1000 (kl/l)
Biodiesel fuel			1.27 kl	0.399 kl	0.124 kl	[Japan] Fuel usage of bio-diesel (B5) [kl]* ^{D11-5}
CO ₂ Emission: global			741 kt	720 kt	778 kt	* ^{D11-6}
	International transportation		215 kt	205 kt	470 kt	(Cargo volume t-km) x (CO ₂ emissions intensity per weight)* ^{D11-2}
	Intra-region outside Japan		411 kt	403 kt	177kt	(Transportation costs) x (CO ₂ emissions intensity per transportation costs)* ^{D11-3}
	Japan		115 kt	112 kt	130 kt ☒	• Excludes some organizations* ^{D11-5} • Truck* ^{D11-4} 1. Truck fuel method: (Fuel usage [kl]) x CO ₂ emission factor 2. Truck fuel consumption method: (Fuel consumption [kl]) = (Transportation distance [km] / Fuel efficiency [km / l] x 1/1000 (kl / l) x CO ₂ emission factor 3. Improved truck ton-kilometer method: (Cargo volume [t-km]) x (Improved truck ton-kilometer method based fuel use intensity [l / t-km] x 1/1000 (kl / l) x CO ₂ emission factor • Rail, sea, and air Conventional ton-kilometer method: (Cargo volume [t-km]) x (Conventional t-km-based CO ₂ emissions intensity [g-CO ₂ / t-km]) × 1/1,000,000 (t-CO ₂ / g-CO ₂)
	Transportation Amount by Transportation Method (Japan)		770 million tons-kilometers	750 million tons-kilometers	680 million tons-kilometers	Sum of cargo volume [t-km] in Japan • Excludes some organizations* ^{D11-5}
	(Breakdown)	Air	1 million tons-kilometers	1 million tons-kilometers	1 million tons-kilometers	—
		Truck	713 million tons-kilometers	676 million tons-kilometers	617 million tons-kilometers	—
		Ship	51 million tons-kilometers	59 million tons-kilometers	51 million tons-kilometers	—
		Railroad	5 million tons-kilometers	15 million tons-kilometers	10 million tons-kilometers	—

*D11-1: Consignors' Guidelines for the Act on Rationalization of Energy Use and Shift to Non-fossil Energy – 2026 Revised Version
*D11-2: Use of "Global Logistics Emissions Council Framework v3.1" from FY 2026
*D11-3: Emissions Intensity Database for Calculating Greenhouse Gas Emissions of Organizations through Supply Chains (Ver. 3.6) by MOE
*D11-4: Joint Guidelines for CO₂ Emissions Calculation Methods in Logistics (Ver. 3.2)
*D11-5: Six of the domestic group companies are excluded as they are not equipped with an emissions calculation system.
*D11-6: The above calculations are for transportation where the Panasonic Group is the consignor, as specified in Energy Saving Law Guidebook for Consignors published by the Agency for Natural Resources and Energy.

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*See [Page 39](#)

	FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Recycled resin	17.2 kt	15.2 kt	17.1 kt	Of the recycled resin, the mass of the pure recycled material that includes neither new resin nor any newly added or mixed additives or fillers. The calculation is based on the information available to us because some manufacturers have restrictions on disclosing their production information.
Total wastes including revenue-generating waste	258 kt	278 kt	273 kt ☒	Sum of the generated volume of industrial wastes, general wastes, and valuables.
Landfill	1.5 kt	1.9 kt	2.0 kt	—
Factory waste recycling ratio	99.3%	99.2%	—	Amount of resources recycled / (Amount of resources recycled + Amount of landfill) In recent years, the recycling rate of industrial waste has remained at a high level of more than 99%. As this figure was excluded from the FY 2026 target, no figures are provided.

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■ Recycling

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Collected products		151 kt	145 kt	140 kt	• The calculations cover results in Japan. • Personal computers are not included in the totals. As for personal computer, PC3R Promotion Association collects and recycles PCs under the joint scheme with member companies. • The number or weight of products processed for recycling are the total of waste home appliances to which we applied some form of recycling process during fiscal 2026. • The number of products collected from designated recyclers and products processed for recycling do not include items of which the manufacturer is unknown due to an error in the recycling form, or any other reason. • All figures were truncated after the decimal point.
	CRT TVs	3 kt	3 kt	2 kt	
	Plasma/LCD TVs	9 kt	9 kt	8 kt	
	Air conditioners	34 kt	35 kt	36 kt	
	Refrigerators/freezers	56 kt	51 kt	48 kt	
	Washing machines/clothes dryers	46 kt	44 kt	44 kt	
Recycled products		113 kt	110 kt	108 kt	• The calculations cover results in Japan. • Others include plastics, chlorofluorocarbons, etc. • All figures were truncated after the decimal point.
	Metals	83 kt	81 kt	79 kt	
	Glass	1 kt	1 kt	0.9 kt	
	Other	28 kt	27 kt	27 kt	
Generated waste (=Collected products-Recycled products)		37 kt	35 kt	32kt	• The calculations cover results in Japan. • All figures were truncated after the decimal point.

■ Water

* See [🔗https://holdings.panasonic/global/corporate/sustainability/environment/water.html](https://holdings.panasonic/global/corporate/sustainability/environment/water.html)

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Water Withdrawal		13,866 thousand m³	13,486 thousand m³	13,453 thousand m³ 🔗	Total water withdrawal (total water withdrawal from municipal water/industrial water, groundwater, rivers/lakes)
	Municipal water/industrial water	8,622 thousand m³	8,344 thousand m³	8,365 thousand m³	—
	Groundwater	5,244 thousand m³	5,142 thousand m³	5,088 thousand m³	—
	Rivers/lakes	0 thousand m³	0 thousand m³	0 thousand m³	—
Recycled water		1,392 thousand m³	1,400 thousand m³	1,326 thousand m³	—
Water discharged		10,598 thousand m³	10,446 thousand m³	10,230 thousand m³	Total water discharge (to sewage and public water areas)
	Sewer systems	4,902 thousand m³	4,710 thousand m³	4,582 thousand m³	—
	Waterways	5,696 thousand m³	5,736 thousand m³	5,648 thousand m³	—
Water withdrawal at factories per unit of production		35.1 %	35.4 %	36.6%	Compared to FY2010

■ Water Consumption by Region (FY2026)

* See [🔗https://holdings.panasonic/global/corporate/sustainability/environment/water.html](https://holdings.panasonic/global/corporate/sustainability/environment/water.html)

Region	Water withdrawal				Water discharged			Consumption	Items regarding environmental data such as the calculation methods, etc.
		Municipal water/ industrial water	Groundwater	Rivers/lakes		Sewer systems	Waterways		
Japan	7,627 thousand m³	3,077 thousand m³	4,550 thousand m³	0 thousand m³	6,371 thousand m³	1,419 thousand m³	4,952 thousand m³	1,256 thousand m³	—
China and North East Asia	2,624 thousand m³	2,614 thousand m³	10 thousand m³	0 thousand m³	1,965 thousand m³	1,637 thousand m³	328 thousand m³	659 thousand m³	—
Southeast Asia and Pacific	2,285 thousand m³	2,057 thousand m³	228 thousand m³	0 thousand m³	1,447 thousand m³	1,108 thousand m³	339 thousand m³	838 thousand m³	—
North America and Latin America	610 thousand m³	523 thousand m³	87 thousand m³	0 thousand m³	362 thousand m³	333 thousand m³	29 thousand m³	248 thousand m³	—
Europe and CIS	71 thousand m³	64 thousand m³	7 thousand m³	0 thousand m³	54 thousand m³	54 thousand m³	0 thousand m³	17 thousand m³	—
India, South Asia, Middle East and Africa	236 thousand m³	30 thousand m³	206 thousand m³	0 thousand m³	31 thousand m³	31 thousand m³	0 thousand m³	205 thousand m³	—
Total	13,453 thousand m³	8,365 thousand m³	5,088 thousand m³	0 thousand m³	10,230 thousand m³	4,582 thousand m³	5,648 thousand m³	3,223 thousand m³	—

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■ Chemical Substances

* The scope of chemical substances is as specified in Panasonic Group Chemical Substances Management Rank Guidelines (for Factories).

* Results from 10 production sites under Panasonic HVAC & CC were not included.

* See <https://holdings.panasonic/global/corporate/sustainability/environment/chemical.html>

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Input		188 kt	197 kt	183 kt	—
Release/Transfer		3.44 kt	3.65 kt	4.22 kt	—
Release		2.78 kt	2.93 kt	3.37 kt	—
	Released into waterways	0.07 kt	0.03 kt	0.03 kt	—
	Released into air	2.71 kt	2.90 kt	3.34 kt	—
	including VOC emissions	1.43 kt	1.59 kt	1.52 kt	Emissions of Volatile Organic Compounds (VOC) into the air associated with use. The calculation covers 100 major VOC substances that Panasonic Group selected from those listed in the Air Pollution Control Act.
	Released into soil	0 kt	0 kt	0 kt	—
Transfer		0.66 kt	0.72 kt	0.85 kt	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 and Public Cleansing Act is included in Recycled.
Recycled		11.9 kt	12.7 kt	13.1 kt	The amount of substances recycled with revenue, as well as those recycled free of charge or with any payment.
Shipped as products		159 kt	167 kt	153 kt	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.
Removed		12.9 kt	13.0 kt	12.8 kt	The amount of substances converted into other substances through neutralization, decomposition, or other chemical treatment.
Human Environmental Impact		386 kcount	339 kcount	440 kcount	* The scale of human environmental impact = Hazardousness factor x (Substance emission volume + Substance transfer volume) Hazardousness factors are generated by the Panasonic Group by applying a factor to substances categorized according to their impact on human health and the environment. The applicable factors are: A: 10,000; B: 1,000; C: 100; D: 10; E: 1.

■ Environmental Accounting

*See [Page 17](#)

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Environmental conservation in factories					
	Investments	3,791 million yen	3,241 million yen	4,711 million yen	Includes all investments relating to environmental conservation. The difference or appropriate portions (divided proportionally) are not calculated.
	Expenses	128 million yen	61 million yen	51 million yen	Includes all investments relating to environmental conservation. The difference or appropriate portions (divided proportionally) are not calculated. 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.
	Economic benefit	907 million yen	394 million yen	303 million yen	The economic benefit represents the cost of energy savings achieved through energy conservation, which translates into cost reductions that contribute to climate change mitigation.
Environmental Conservation Benefits (in physical terms)					
	CO ₂ emissions from production activities	265 kt	127 kt	137 kt	Calculated as the year-on-year reduction in net emissions, where net emissions are the total of Scope 1 and 2 emissions less the amount offset by carbon credits, excluding non-energy-source emissions.
	Human Environmental Impact	45 kcount	47 kcount	▲101 kcount	—
	Landfill of waste	0.8 kt	▲0.4 kt	▲0.1 kt	—
	Water consumption	1,405 thousand m³	380 thousand m³	33 thousand m³	—
Economic Effects for Customers (Electricity cost reduction from product usage)					
	Reduced amount of electricity	46.7 TWh	80.6 TWh	76.1TWh	Calculated under the same conditions as CONTRIBUTION IMPACT (Avoided CO ₂ emissions); however, excluding the contribution from electrification.
	Reduced electricity costs	1,256,718 million yen	2,298,065 million yen	2,277,429 million yen	Electricity costs were set for each region based on our investigation.

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■ Number of ISO 14001 certifications obtained

* See [🔗https://holdings.panasonic/global/corporate/sustainability/environment/governance/ems.html](https://holdings.panasonic/global/corporate/sustainability/environment/governance/ems.html)

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Number of certifications obtained		144	133	128	The number includes integrated certifications. The number of obtained status varies every year depending on the situation such as reorganization or closure of business divisions/sites, or promotion to obtain integrated certification.
	Manufacturing	123	113	109	
	Japan	20	18	16	
	North America and Latin America	13	9	9	
	Europe and CIS	7	6	4	
	Southeast Asia and Pacific	34	33	33	
	China and North East Asia	43	41	41	
	India, South Asia, Middle East and Africa	6	6	6	
	Non-manufacturing	21	20	19	
	Japan	10	10	9	
	North America and Latin America	0	0	0	
	Europe and CIS	1	1	1	
	Southeast Asia and Pacific	8	7	7	
	China and North East Asia	1	1	1	
	India, South Asia, Middle East and Africa	1	1	1	

■ Cases of violations of laws and ordinances

*Global (Japan)

*See [🔗https://holdings.panasonic/global/corporate/sustainability/environment/governance/risk.html](https://holdings.panasonic/global/corporate/sustainability/environment/governance/risk.html)

		FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Environmental pollution		4 (0)	0 (0)	0 (0)	• Number violations of environmental laws and ordinances that occurred in Group factories.
	Air	2 (0)	0 (0)	0 (0)	—
	Water quality	0 (0)	0 (0)	0 (0)	—
	Noise	0 (0)	0 (0)	0 (0)	—
	Odor	0 (0)	0 (0)	0 (0)	—
	Waste	2 (0)	0 (0)	0 (0)	—
Other	Permission /Approval	0 (0)	0 (0)	0 (0)	—

■ Soil and Groundwater Pollution Surveys and Remedial Measures

*Global (Japan)

*See [🔗https://holdings.panasonic/global/corporate/sustainability/environment/governance/risk.html](https://holdings.panasonic/global/corporate/sustainability/environment/governance/risk.html)

	FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Number of sites that completed remedial measures	4 (4)	2 (1)	2 (1)	—
Number of sites currently taking remedial measures	40 (35)	38 (34)	37 (34)	—

■ Total Procurement of Timber and Wood Materials

* See [🔗https://holdings.panasonic/global/corporate/sustainability/environment/biodiversity.html](https://holdings.panasonic/global/corporate/sustainability/environment/biodiversity.html)

	FY2024	FY2025	FY2026	Items regarding environmental data such as the calculation methods, etc.
Total procurement	199 thousand m³	193 thousand m³	149 thousand m³	—
Category 1: Timber and wood materials with priority procurement	76.6 %	65.3 %	80.6%	• Materials certified by a third party as not destroying forests with high conservation value • Those certified by a third party that the supplier conducts sustainable forest management • Recycled wood materials
Category 2: Timber and wood materials acceptable for procurement	23.4 %	34.7 %	19.4%	• Those confirmed as being legally logged. • Materials for which legality of logging has been certified by an industry organization or equivalent.
Category 3: Timber and wood materials to be avoided for procurement	0 %	0 %	0%	• Materials for which legality of logging cannot be confirmed.

Environment

Environmental Management

Climate Change Materiality

Resources Materiality

Environmental Data

Other Initiatives

Other Initiatives

The following items are described on the webpage.

■ Environmental Management

[🔗 Environmental Governance](#)

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

[🔗 Environmental Management Systems](#)

<https://holdings.panasonic/global/corporate/sustainability/environment/governance/ems.html>

[🔗 Environmental Information Systems](#)

<https://holdings.panasonic/global/corporate/sustainability/environment/governance/it.html>

[🔗 Eco-conscious Products and Factories](#)

<https://holdings.panasonic/global/corporate/sustainability/environment/green-products.html>

[🔗 Collaboration Across the Supply Chain](#)

<https://holdings.panasonic/global/corporate/sustainability/environment/supply-chain.html>

[🔗 Strategic Resilience through Scenario Analysis](#)

<https://holdings.panasonic/global/corporate/sustainability/environment/tcfd/resilience.html>

■ Climate Change

[🔗 Global Warming Adaptation](#)

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

[🔗 Environmental Support for the Entire Factory](#)

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

[🔗 Green Logistics](#)

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

■ Resources

[🔗 Global Initiatives for Used Product Recycling](#)

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

■ Biodiversity Conservation

[🔗 https://holdings.panasonic/global/corporate/sustainability/environment/biodiversity.html](#)

■ Water Resource Conservation

[🔗 https://holdings.panasonic/global/corporate/sustainability/environment/water.html](#)

■ Pollution

[🔗 Environmental Risk Management](#)

<https://holdings.panasonic/global/corporate/sustainability/environment/governance/risk.html>

[🔗 Chemical Substance Management](#)

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

■ Environmental Sustainability Management Across the World

[🔗 https://holdings.panasonic/global/corporate/sustainability/environment/global-activities.html](#)

■ Human Resource Development

[🔗 https://holdings.panasonic/global/corporate/sustainability/environment/human-resources.html](#)

■ Environmental Communication

[🔗 https://holdings.panasonic/global/corporate/sustainability/environment/communication.html](#)

■ History of Environmental Activities

[🔗 https://holdings.panasonic/global/corporate/sustainability/environment/history.html](#)