## **Initiatives to Support Value Creation**

## **Initiatives for** the **Environment**

Aiming at our corporate philosophy "To contribute to realization of a sustainable, eco-friendly, and prosperous society by providing better products, at a faster speed, in larger numbers, at a lower cost and by smarter means," we will work diligently on decarbonization and the reduction of environmental burden.















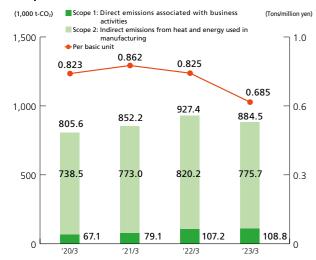
In July 2023, we submitted a commitment letter to the SBT Initiative (SBTi), an organization that certifies scientifically consistent greenhouse gas emission reduction targets as stipulated by the Paris Agreement. We announced that we aim to obtain SBT certification within two years. The Group identifies "Minimizing the environmental impact of

business activities" as one of its material issues and will aim at achieving a 30 percent reduction in greenhouse gas emissions by the fiscal year ending March 2031 (compared with the fiscal year ended March 2021) and at carbon neutrality in 2050 at the latest, in the whole Group.

### Greenhouse gas emissions during the fiscal year ended March 2023

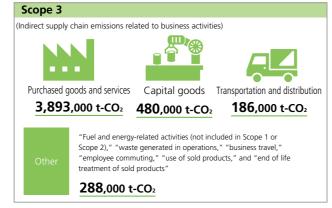


#### Scopes 1 and 2 emissions



For Scopes 1 and 2, the Group has set a 10% reduction per unit sales compared with the fiscal year ended March 2020 by the fiscal year ending March 2026 as a medium-term target. In the fiscal year ended March 2023, we realized a 16.8% reduction per unit sales compared with the fiscal year ended March 2020 through more efficient productivity and introducing renewable energy, to achieve the target earlier than we had planned. Although PFC and SF6 emissions comprise a large percentage of the emissions in Scope 1, our emissions are expected to be reduced in the future as we installed new emissions removal equipment during the fiscal year ended March 2023. In this fiscal year, we are setting a new medium-term target toward 2050 carbon neutrality.

In Scope 3, emissions from Category 4 (transportation and



\* Out of the 15 categories in Scope 3, we use the nine categories above in our calculations.



The detailed environmental

distribution) increased in the fiscal year ended March 2022 because it was difficult to secure sea freight owing to the spread of COVID-19, but emissions were improved in the fiscal year ended March 2023 as sea freight became more available.

As our Group's Scope 3 emissions are five times higher than Scopes 1 and 2, we will set Scope 3 targets in the fiscal year ending March 2024, and will work to reduce them going forward. For that purpose, we are conducting surveys in cooperation with our suppliers of greenhouse gas emissions in Category 1 (purchased goods and services), which account for 80% of all Scope 3 emissions. These surveys will allow us to understand current emissions and set appropriate reduction targets.

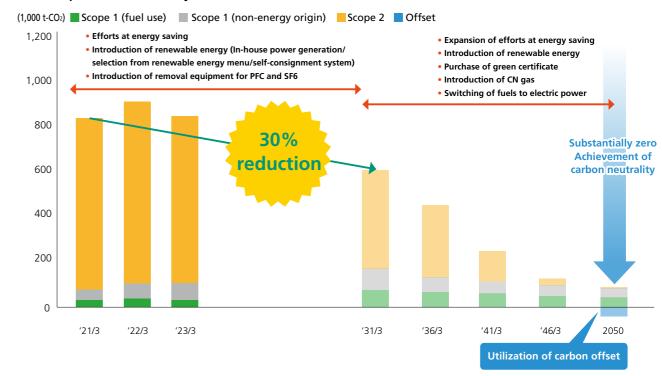
### Initiative for carbon neutrality by 2050

The Group is promoting a 30 percent reduction in greenhouse gas emissions (Scopes 1 & 2) compared with the fiscal year ended March 2021 by the fiscal year ending March 2031, and to achieve carbon neutrality by 2050. We are promoting the procurement of renewable energy through the introduction of in-house solar power generation equipment, self-consignment systems, electric power procurement

agreements and PPAs.

In Japan in June 2023, we started to send electricity from solar power generation (about 2.4 MW) to our five offices and plants in the Kanto area using the self-consignment system. In the future, we aim at increasing the output of power generation to about 10 MW by around September 2023 and to over 50 MW by June 2025.

#### Road map to carbon neutrality



#### Status of and plan for the installation of solar power generating equipment\*

Country	Plant	Condition	Scale (MW)
	Bang Pa-in Plant	Existing	14.6
Thailand	bally ra-III rialit	Planned	6.0
Indiano	Lan Duri Blant	Existing	1.9
	Lop Buri Plant	Planned	14.1
Malaysia	Malaysia Plant	Planned	1.6
Philippines	Cebu Plant	Planned	7.9
Singapore	Jurong Plant	Planned	0.8
America	Chatsworth Plant	Planned	1.4
Slovakia	Kosice Plant	Planned	0.8
Hungary	Kisber Plant	Planned	0.7
Japan	Hiroshima Plant	Planned	1.5

<sup>\*</sup>This represents the current installation plans, and is subject to change.

#### Power procurement agreements (planned)\*

Country/region	Plant	Electric energy procured (GWh/ annum)
Thailand	Bang Pa-in Plant	129.2
Indiana	Lop Buri Plant	63.2
Philippines	Cebu Plant	179.1
Cambodia	Cambodia Plant	70.0
Europe	The whole Europe	42.0

# **Assessment from CDP**

In the CDP Scores we were awarded "A-" in Climate Change 2022 and "A" in Water Security 2022



**57** MinebeaMitsumi Group Integrated Report 2023 MinebeaMitsumi Group Integrated Report 2023 58 **Initiatives for the Environment** 

## The MMI Beyond Zero initiative

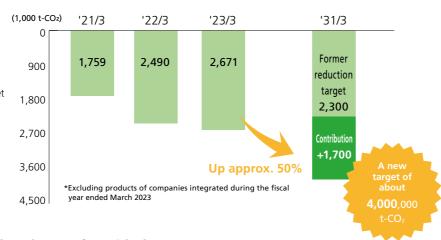
The Group's "MMI Beyond Zero" initiative aims to contribute to the reduction of global CO<sub>2</sub> emissions by enhancing the energy-saving features of our products. By using these products, our customers will in turn reduce the electricity consumed by their products, and their customers' products. As a part of this initiative, we have been tracking the amount of CO2 emission reduction contribution by our products since the fiscal year ended March 2021.

#### Actual volume of avoided

#### CO₂ emissions and new target

The result for the fiscal year ended March 2023 was about 2,671,000 t-CO<sub>2</sub> and increased by about 7.3% year on year.

We achieved in the previous fiscal year the target set in the fiscal year ended March 2021. This fiscal year, we set a new target of reducing "about 4,000,000 t-CO2, an increase of about 50% of the actual result for the fiscal year ended March 2023, by the fiscal year ending March 2031." We will continue to contribute to reducing global CO<sub>2</sub> emissions through the development and promotion of products with advanced energy-saving features.



#### Examples of products with a high volume of avoided CO<sub>2</sub>

#### **High-performance fan motor bearings**

Bearings support rotating shafts and are the most important part of rotary components such as motors.

We specialize in miniature ball bearings, which are used in fan motors, which are used widely in IT-related electronic devices and components for cooling.





avoided CO<sub>2</sub> Approx. 1,424,000 t-CO<sub>2</sub>

#### **IGBT: Insulated gate bipolar transistors**

An IGBT is a transistor most suitable for control of high voltage and large current and is used to convert electricity sent from a power source into a form suitable for a motor or electrical equipment.

It is used for an electric car and a home electrical appliance, such as an air conditioner, and contributes to energy saving by controlling rotation speed of a motor efficiently.



Our IGBT wafer

avoided CO<sub>2</sub> Approx. 252,000 t-CO<sub>2</sub>

## **Progress of Green Bond Framework**

Progress of Green Bonds issued in November 2022 is as shown in the right table. We will continue to contribute to realizing a sustainable, earthfriendly, and affluent society.

. 3	e of fund allotment				
Business category	Eligible business	Required amount	Allocated	Unallocated	Expected allocation time
	Capital investment in production equipment for high-quality bearings to contribute to power conservation				
Production of ball bearings	Capital investment in production equipment for bearings with innovatively improved precision	25,000	13,607	10,497	By fisca 2024
	Capital investment in production equipment for bearings for the chief motors of an EV				
Procurement of decarbonized	Introduction, operation, and maintenance of solar power generation systems to our own equipment		896		
power sources	Purchase of renewable energy electric power		0		

New finance/ refinance	Sum	Proportion (%)
New finance	971	6.69
Refinance	13,532	93.31
Total	14,503	100.00

Impact reporting  *Regarding some of the plants in the Thailand area for which we allocated funds, annual reductions are expected, because they will start to work in the fiscal					
Business category	Eligible business	Final use	Avoided CO <sub>2</sub> emissions (t-CO <sub>2</sub> /annum)	[Expected] avoided CO <sub>2</sub> emissions (t-CO <sub>2</sub> /annum)*	
hoarings		Fan motors and quality home electrical appliances (e.g. air conditioners) used at data centers	242,306	473,751	

Business category	Eligible business	Final use	Avoided CO <sub>2</sub> emissions (t-CO <sub>2</sub> /annum)	[Expected] avoided CO <sub>2</sub> emissions (t-CO <sub>2</sub> /annum)*
	Introduction, operation, and maintenance of solar power generation systems to our own equipment	Thailand	2,919	7,604

### **Initiative for TCFD recommendations**

The Group recognizes the importance of disclosing climate-related financial information and in 2020 endorsed the recommendations of the Task Force on Climate-related Financial Information Disclosures (TCFD). As such, we disclose information on mitigating the risks and seizing the opportunities brought about by climate change.

The Group sees it as one of its missions to contribute to achieving global carbon neutrality in 2050. In addition to reducing its own greenhouse gas emissions to achieve carbon neutrality, the Group work to help its customers reduce their greenhouse gas emissions through its products. We have set a reduction target for our own greenhouse gas emissions in the fiscal year ending March 2031 at a 30 percent reduction compared with the fiscal year ended March 2021 and, after we achieve the target, will be making efforts to achieve carbon neutrality by 2050 at the latest.

We are engaged in initiatives under MMI Beyond Zero to help customers reduce their greenhouse gas emissions through our products,

TCFD can be viewed



and we will also use these initiatives to control our own Scope 3 emissions. We will promote these initiatives as key business strategies, including the supply of components for products and equipment such as electric vehicles, solar power generators, and green data centers, as well as the development of energy-saving, resource-saving, long-lifespan products

### Results of scenario analysis

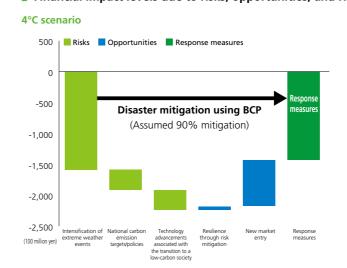
Based on the scenario analysis, the graphs below were created to show the potential level of financial impact on the Company due to climate change (impact on operating income in fiscal 2030, assuming operating income achievement of 250 billion yen). The graphs show the degree of financial impacts from negative and positive factors, namely risks and opportunities. They also show the impact of response measures taken to minimize negative impacts by mitigating the increased flood risk associated with more severe weather events.

Under the 1.5°C Scenario, the opportunity to enter new markets yields a projected profit of around 140 billion yen. This is larger than the 80 billion yen profit predicted under the 4°C Scenario, indicating the importance of fully seizing business opportunities

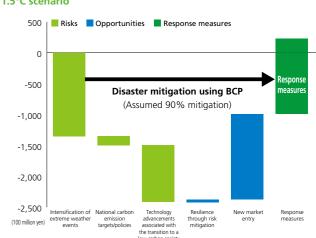
On the other hand, the analysis suggested a possibility that a terrible weather disaster caused by climate change may have a great impact on the Company's finances as the flood risk. The Group experienced a shutdown of two plants of the five that it owned at the time because of a flood occurred in the middle part of Thailand in 2011. Since then it has taken physical measures, including drawing up of a BCP and raising of waterproof banks and plant premises, against the flood risk.

We are confident that we have now taken appropriate measures according to the degree of the flood risk at plants. We will follow up on the state of the measures and endeavor to improve the measures so that the flood risk will not be materialized.

#### Financial impact levels due to risks, opportunities, and risk mitigation measures







**59** MinebeaMitsumi Group Integrated Report 2023 MinebeaMitsumi Group Integrated Report 2023 60

## **Initiatives to Support Value Creation Initiatives for the Environment**

#### Financial impact evaluation by scenario analysis and response measures

ltem	Impact on the business	Evaluation	Response measures to risks/opportunities	Applicable scenario
Intensification of extreme weather events (supply chain	<1.5°C/4°C> Due to the potential for river flooding near our sites in Thailand, Cambodia and China, repair costs and lost sales could occur. Moreover, sites of MITSUMI ELECTRIC	***	Risks:     We are reviewing our BCP and establishing a production system that is more resistant to disaster impacts. In addition to taking our own measures, such as establishing duplicate suppliers in our supply chain, that will allow us to adapt more quickly even in the event of a disaster, we will survey the mitigation efforts of our suppliers.	1.5°C/ 4°C
disruption, and suspension of internal operations)	(Philippines, etc.) located in coastal areas could be similarly affected by disasters such as storm surges and typhoons.	***	Risks: For logistics, we will consider further modal shifting globally and promote production that is closer to consumption markets. We will promote engagements for ESG with parts manufacturers to deepen relations with them so that both can achieve sustainable development.	4°C
	<1.5°C> Energy and greenhouse gas emissions costs will increase with the adoption of carbon taxes, emissions trading, and green electricity	*	Risks:     We will need to promote measures such as CO; emissions reduction by investing in energy-saving, as well as Scope 2 emissions reduction by increasing the ratio of renewable energy procurement.	1.5°C
Introduction of carbon taxes and emissions trading, and national carbon emission targets and policies (cost increases for policy compliance)	purchase requirements. At the same time, electricity rates will trend downward along with the widespread adoption of renewable energy. <4°C> It is predicted that a certain level of increases in energy and greenhouse gas emission costs will be incurred due to the introduction of carbon taxes, emission trading, and green electricity purchasing requirements, etc., and indirect costs will increase.	*	Risks:  We will need to promote measures such as CO; emissions reduction by investing in energy-saving, as well as Scope 2 emissions reduction by increasing the ratio of renewable energy procurement, to avoid being subject to regulations.  With renewable electricity procurement in mind, we will prepare for the increased energy costs under the financial plan, and make efforts to improve production efficiency.  We will promote the procurement of renewable electricity while increasing the amount of renewable energy we generate.	1.5°C/ 4°C
Technology advancements to associated with the transition to a low-carbon society	(1.5°C4°C5   There is a growing need for or oroducts with outstanding energy-saving performance and those that help reduce greenhouse gas emissions. Those products that cannot keep pace with technological innovation will get eliminated. Moreover, we will need	** (1.5°C) * (4°C)	Risks:  We will need to promote advanced R&D and technological development to meet low-carbon needs, and to make proactive and systematic investment to remain competitive.  Opportunities:  As the need for high-efficiency products to reduce energy costs will increase substantially, we will aim to expand the market using our energy-saving technology.	1.5°C/ 4°C
	to bear the costs of the necessary R&D and technological development.	**	Opportunities:  We will create a system to calculate the CO <sub>2</sub> emissions reduction effect of our products along with their carbon footprints, and will provide this as part of the design and development output data.	1.5℃
Resilience through risk mitigation	<1.5°C> Climate change is expected to make major disasters more frequent, similar to past flooding in Thailand. By implementing the necessary BCP activities, we can enhance the appeal of our products to customers.  <4°C> Climate change is expected to make major disasters even more frequent, similar to past flooding in Thailand. By implementing the necessary BCP activities, we can enhance the appeal of our products to customers.	*	Opportunities:  • We will create and maintain an effective BCP, improve communication with customers to enhance our reputation for reliability with them, and disclose information about our BCP system.	1.5°C/ 4°C
Changes in product and	increase substantially. /As concern about climate change promotes the widespread adoption of		Opportunities:  • During the transition to a low-carbon society, we will work to expand sales by implementing a growth strategy for our energy-saving technology under our business plan.  • Developing and combining next-generation technologies by implementing digital transformation (DX)  • We will continue to promote M&A activities globally, and promote a cooperative growth strategy to dominate expanding markets. (Expanding mass production outside Japan)	1.5°C/ 4°C
service needs/ New market entry			Opportunities:  • We will increase investment and promote technological development to enhance the added-value appeal of our products. This includes assessment of product environmental performance, including energy-saving and low-carbon specifications, and labeling our products with relevant carbon footprint data. (GX promotion and target achievement)	1.5℃
		**	Opportunities:  • We will promote further technological development to create products with high energy-saving performance.	4°C

	Profit (100 million yen)	Costs (100 million yen)
***	2,500-1,250	2,500-1,250
**	1,250-625	1,250-625
*	625-0	625-0



#### The world turned the rudder largely to Green Transformation (GX)

In 2020, the world was struck by the raging spread of COVID-19 and was forced to take countermeasures against the virus, resulting in a slowdown of the world economy. Under those circumstances, the EU worked out a new growth strategy called the European Green Deal. It declared that it would produce new employment through the efforts holding up a goal of 2050 Carbon Neutrality. Spurred by those movements of the EU and the U.K., Japan, the U.S. and other countries also declared 2050 Carbon Neutrality one after another.

Furthermore, carbon neutrality was set as a goal of companies, not only countries. IT major companies declared they would achieve carbon neutrality in their business by 2030 one after another, and requested their suppliers to use renewable energy to manufacture components.

#### Products to contribute to preserving the global environment, which are made by environmentally friendly methods

MinebeaMitsumi's original business was the production of bearings. A bearing is a part to minimize friction and resistance and to reduce energy loss in mechanical movement. Our ultra-precision machining technology used for motors, sensors, and analog semiconductors, not only bearings, contributes to reducing loads to the environment in such ways as miniaturizing our customers' products and prolonging product life, not only saving energy.

Now, MinebeaMitsumi is making every effort to produce products that contribute to preserving the global environment using environmentally friendly production methods. We have declared that we will achieve carbon neutrality by 2050.

In the future, we will focus even more on expanding the use of renewable energy and developing products that help EVs run safely and comfortably.

#### Even though we are from different countries, our desire to preserve the global environment is the same. Communication that unifies is important.

Since I joined the Environment Agency in 1986, I had been engaged in preparing a bill for the Basic Act on the Environment and in starting the Eco Mark system, and left to serve as the first secretary in charge of the environment in the Japanese Embassy in China in 1998. Moreover, after the Great East Japan Earthquake, I served as Director of Policy Planning and Coordination Division and Press Secretary at the newly set up Secretariat of the Nuclear Regulation Authority.

In Beijing, even with a person with whom I had engaged in difficult diplomatic negotiations and disagreed with over national interests, I felt that I could agree with them on the thought that, as a citizen,

we should pass on the global environment, which remains a great blessing, to our children. At the Secretariat of the Nuclear Regulation Authority, I learned it is important to explain what we were thinking and what we were going to work on, in words everyone can understand, as we tossed matters back and forth with reporters twice a week, while movie cameras filmed the situation. I also wish to make efforts so that we make not only people in Japan but also those in foreign countries understand the Company's policy on and the actual results of environmental preservation, at MinebeaMitsumi, which globally develops its business.

#### Overcome common problems to humanity with the power of INTEGRATION of 100 thousand employees

MinebeaMitsumi has the strength of INTEGRATION, for which 100 thousand employees with diverse backgrounds gather to put their heads together. We will continue studying hard all together to protect the global environment of a great blessing and hand over it to the next generation.

61 MinebeaMitsumi Group Integrated Report 2023 MinebeaMitsumi Group Integrated Report 2023 **62**