

# ENVIRONMENT

## Achieving Decarbonization and Lower Environmental Impact

By viewing climate change from the two aspects of opportunities and risks, practicing corporate social responsibility and building further competitive advantage

# Achieving Decarbonization and Lower Environmental Impact

## OMRON's Approach to the Environment

OMRON believes that creating an environmentally sustainable society corresponds to the OMRON Principle of "contributing to a better society," and is proactively working to address global issues such as climate change and resource recycling. In particular, we view "reducing greenhouse gas (GHG) emissions," "transitioning to a circular economy," and "coexisting with nature" as important environmental issues to be addressed. By ensuring effectiveness and establishing frameworks, we are committed to contributing to the creation of a sustainable society and enhancing corporate value.

### OMRON Environmental Policy

OMRON revised the OMRON Environmental Policy on March 1, 2022 as important guidelines to promote the material sustainability issues of SF2030, which are "resolving social issues through our business" and "achieving decarbonization and lower environmental impact," and to achieve the targets. Under this policy, we have defined the key environmental issues OMRON should address and action guidelines and will promote decarbonization and lower environmental impact. Going forward, OMRON will address environmental issues throughout its value chain in accordance with this policy and will meet the expectations of its stakeholders, thereby enhancing its corporate value.



## Environmental Promotion System

OMRON management and executives work together to address environmental issues, with the Board of Directors fulfilling its responsibility for supervision and oversight. As part of our governance system, the president and CEO delegates authority to the individual executive division heads, who are responsible for pursuing environmental issues such as climate change and creation of circular economies. Additionally, the president and CEO reports to the Board of Directors on progress status and important matters, while the Board makes decisions and carries out oversight of executive matters.

Furthermore, as part of efforts to strengthen sustainability governance, which includes environmental initiatives, a director in charge of the environment and a Sustainability Executive were appointed in fiscal 2023. In addition, a Sustainability Committee chaired by the Sustainability Executive (which meets every quarter, in principle) was established to deliberate on environmental measures across the Group and ensure compliance with environmental laws.

## OMRON Environmental Objectives

OMRON has established the OMRON Carbon Zero target, for zero Scope 1 and 2 GHG emissions by 2050. Achieving decarbonization and lower environmental impact was also set as a material sustainability issue, and in addition to the SF2030 sustainability targets (fiscal 2024 targets), six fiscal 2024 targets were also established for five categories, with monitoring of progress. Our Scope 1, 2, and 3 GHG emission targets are certified by the Science Based Targets initiative (SBTi) as 1.5°C or 2.0°C pathway targets.

OMRON Carbon Zero Medium- and Long-term Environmental Targets			
Zero GHG emissions (scope 1 and 2) by 2050			
Material sustainability issues under SF2030	SF2030 (FY2030) goals	SF 1st Stage (FY2024) goals	
Achieving decarbonization and lower environmental impact	The state of building further competitive advantage while solving social issues through reducing greenhouse gas (GHG) emissions in the value chain and establishing a resource recycling model ● Scope 1 and 2: 65% cut <sup>1</sup> vs. FY2016 ● Scope 3: 18% cut <sup>1</sup> vs. FY2016	● Scope 1 and 2: 68% cut vs. FY2016 ● Achieve Carbon Zero at all 76 sites in Japan <sup>2</sup> ● Scope 3, Category 11: Implement energy-saving designs for new products ● Implementing business model transformation, environmentally friendly design, collection and recycling, and sustainable procurement in response to transition to a circular economy	
Issues	FY2024 targets	FY2023 results	Evaluation
Reduction of greenhouse gas emissions	Achieved 68% reduction in absolute amount vs. FY2016 result*	Achieved 68% reduction in absolute amount vs. FY2016 result	Exceeded plan
	Environmental contribution <sup>3</sup> > CO <sub>2</sub> emissions from production sites	Environmental contribution (1,158 thousand ton-CO <sub>2</sub> ) > CO <sub>2</sub> emissions from production sites (75 thousand ton-CO <sub>2</sub> )	As planned
Proper waste management and production	Maintain zero emissions <sup>4</sup> at all global production sites	23 sites (100% progress)	As planned
Compliance with environmental laws	Perform environmental legal assessments at all global production sites	24 sites (100% progress)	As planned
Effective usage of water resources	Reduce water usage at all global production sites by 20% vs. FY 2015 result	Down 48%	Exceeded plan
Facilitating environmental management	Acquire and maintain ISO 14001 certification at all global production sites	24 sites (100% progress)	As planned

\*1 Certified under SBT Initiative in May 2022. In May 2024, the SF2030 (FY2024) target was revised upward from a 53% reduction in the absolute amount to a 68% reduction in the absolute amount vs. FY2016.  
 \*2 GHG emissions from OMRON's electricity use (scope 2) at 13 production sites and 63 non-production sites (headquarters, R&D, and sales)  
 \*3 Volume of CO<sub>2</sub> emissions reduction contributed by society's use of the OMRON Group's energy generation and savings products and services  
 \*4 Recycling of waste: 98% or higher

## Key Environmental Initiatives under SF2030

OMRON aims to solve social issues through the reduction of GHG emissions in its value chain and the establishment of a resource recycling model by 2030, as well as to achieve a state in which further competitive advantages are built.

### Reduction of GHG Emissions

#### (Scope 1 and Scope 2: Emissions from the OMRON Group)

To reduce Scope 1 and Scope 2 emissions, we will promote thorough energy conservation and use of renewable energy to transition to clean electricity. Moreover, by utilizing the renewable electricity-derived "J-Credit Scheme"<sup>\*1</sup> provided by our own energy solutions business, and "self-consignment"<sup>\*2</sup>, we aim to achieve 100% renewable energy at our sites in Japan by fiscal 2024.

### Reduction of GHG Emissions

#### (Scope 3, Category 11: Use of Sold Products)

With regard to Scope 3, we will promote power-saving design, downsizing and weight reduction of new products, and replacement with low-power-consumption products in each business to prioritize reductions in Scope 3, Category 11, which accounts for approximately 70% of OMRON's GHG emissions.

### Transitioning to a Circular Economy

In order to solve the problems of resource depletion and environmental destruction, we will work to transition to a circular economy through such initiatives as "transformation of business models," "extension of product life," "expansion of collection and recycling," "procurement of recyclable raw materials," and "maximization of recycling rates." Specifically, for "procurement of recyclable raw materials," we are

reducing plastic waste in the production process and replacing containers (outer packaging) for products with paper packaging materials. For "expansion of collection and recycling," we are promoting in-process recycling, collection and recycling of OMRON products in cooperation with partners and customers and reviewing the production process and improving the recycling rate of resin waste materials generated in the production process.

\*1 J-Credit Scheme: Under this scheme, the Japanese government certifies a company's environmental value (the effect of not emitting CO<sub>2</sub>).

\*2 Self-consignment: A power supply system that allows businesses that own their own power generation facilities to transmit and supply electricity generated by those facilities to their own factories and offices in remote places via the power grids of general power transmission and distribution business operators and use the electricity.

## Environmental Evaluation Framework

Through our environmental evaluation framework, OMRON minimizes negative environmental impacts throughout the product life cycle to reaffirm our commitment to environmental protection, thus contributing to both environmental issue resolution and sustainable business growth. Within this framework, we classify products that take their environmental impact into account as "Environmentally Conscious Products" and those with a clear contribution to environmental protection throughout their life cycle as "Environmentally Contribution Products."

In line with this approach, we have drawn up our own guidelines for calculating the carbon footprint of a product (CFP) in accordance with relevant global standards.

### Environmentally Contribution Products

Environmentally contribution products refer to OMRON products that help customers address their environmental issues, either through the products themselves or associated services. OMRON uses LCA to assess products with high

environmental performance and visualize the added value of these products in a reliable and transparent manner.

### Environmentally Conscious Products

Environmentally conscious products refer to OMRON products that reduce or mitigate negative environmental impacts and material issues to be addressed during the life cycle of said products. These products must pass the product environmental assessment in the product planning and design stages. As such, all new OMRON products are environmentally conscious.

In the Device & Module Solutions Business, CFPs (Carbon Footprint of Products) have been calculated in accordance with the guidelines for the G9KB series of high-capacity power relays used in new energy equipment, such as power conditioners and energy storage systems. Starting in May 2024, we began providing CFP data of this product series, certified by a third-party organization in accordance with ISO 14067<sup>\*3</sup>, to customers upon request.

In our ongoing effort to support a decarbonized society, we will continue offering CFP data for this product series. We will also expand the range of models included, while further advancing experiments to monitor GHG emissions across the supply chain.

\*3 ISO 14067: A standard on climate change that specifies the requirements and guidelines for quantifying CFPs

## Major FY2023 Initiatives

### Initiatives to Reduce GHG Emissions

We are reducing emissions steadily every year to achieve our environmental targets, exercising energy conservation and using cleaner electricity from renewable energy sources. In fiscal 2023, we continued with capital investment into replacing existing equipment with more efficient, energy-saving equipment, operational optimization based on energy saving diagnostics, and further expansion of solar power generation equipment. Mainly due to the expansion of carbon-zero sites in Japan by utilizing J-Credits and the lowering of production output, as well as the better-than-expected outcomes of energy-saving and energy generation efforts, we achieved a 68% reduction in the absolute amount of GHG emissions in Scope 1 and 2 (compared with fiscal 2016). Accordingly, we have revised upward our targets for fiscal 2024 from a 53% reduction in the absolute amount of emissions to a 68% reduction in the absolute amount of emissions (compared with fiscal 2016). We also achieved a 32% reduction in the absolute amount of GHG emissions in Scope 3 (Cat. 11) (compared with fiscal 2016).

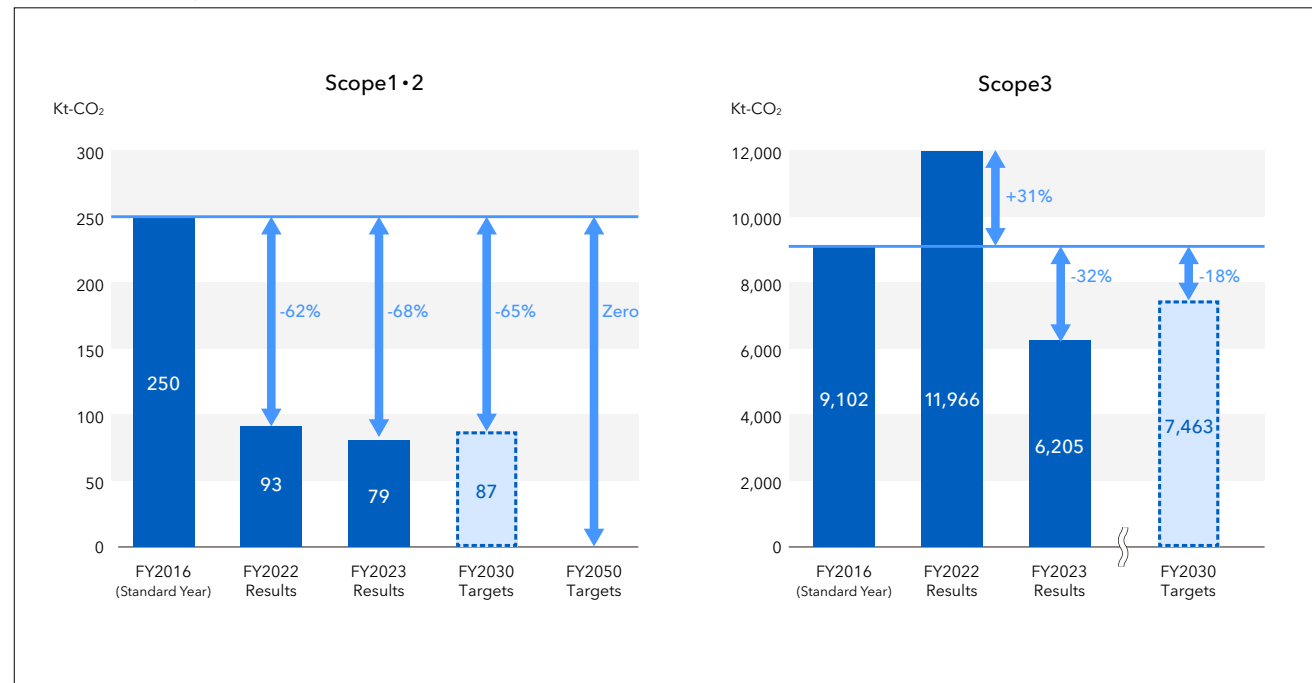
### Initiatives to Transition to a Circular Economy

With the aim of realizing a “circular society,” we are working to reduce waste at all our production sites across the globe. In more concrete terms, we are reducing waste production by minimizing resource usage and promoting efficient use of resources, expanding reuse and recycling efforts, and cutting down on hazardous waste emissions. In fiscal 2023, 23 OMRON Group production sites maintained or achieved zero emissions (11 in Japan and 12 out of Japan). Furthermore, we follow strict waste-sorting practices, ensuring that waste from production sites is categorized

and prepared for recycling before being handed over to recycling services. This process helps reduce landfill waste and promotes more efficient resource use. For example, at the production sites of the Device & Module Solutions Business, they successfully reduced plastic waste produced when molding components by improving production equipment or changing metal molds. This also allowed them to utilize recycled materials while curbing energy consumption. Also, by increasing the recycling rate of molded resin, it

became possible to significantly reduce plastic waste. Likewise, improvements in logistics and reductions in the weight of containers and packaging materials led to a 9% reduction in container material usage and a 17% reduction in packaging material usage (both compared with fiscal 2022). In fiscal 2024, we continue to focus on logistical improvements and reductions in weight.

GHG Emission Targets and Results



## Disclosure in Line with TCFD Recommendations

### Responses to Climate Change

With numerous major disasters occurring worldwide due to extreme weather events, OMRON considers climate change to be one of the most important issues we need to address. Guided by SF2030, we are committed to creating a carbon-neutral society, one of the contemporary issues in our society.

After endorsing the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) in February 2019, we are promoting information disclosure in accordance with the TCFD framework in a bid to enhance the engagement with our shareholders, investors, and other stakeholders with regard to the OMRON Group's initiatives for climate change.

### Governance

#### Role of the Board of Directors / Monitoring System

The OMRON Corporate Governance Policy clearly stipulates that the Board of Directors shall determine and disclose the Group's sustainability policy, material sustainability issues, and targets, including initiatives to address climate-related risks based on the TCFD and other frameworks. In accordance with TCFD recommendations and in connection to SF2030 and the medium-term management plan, the Executive Council and the Sustainable Committee discuss risks, business opportunities, targets, and specific measures related to climate change for each business, as identified by scenario analyses, make decisions, manage progress, and conduct monitoring on a regular basis, and consider corrective measures, as necessary. The Board of Directors receives, on a regular basis, reports on what has been discussed and decided by the Executive Council and deliberates on and supervises the matters. Evaluations concerning the GHG

emissions reduction target and evaluations based on sustainability indicators (Dow Jones Sustainability Indices) by third parties are included among the evaluation indicators for the medium- to long-term, performance-linked compensation for inside Directors and Executive Officers for the period from fiscal 2021 to fiscal 2024.

### Strategy

#### Short-, Medium-, and Long-term Climate-related Risks and Opportunities and Responses

In SF2030, we have defined "achieving decarbonization and lower environmental impact" as a material sustainability issue. Viewing climate change from two aspects, opportunities and risks, we are committed to fulfilling our corporate social responsibility and further building our competitive advantage. In order to prevent the expansion of the serious impacts of climate change on ecosystems and human society, we will work to reduce GHG emissions throughout its value chain through "products and services that contribute to carbon neutrality," "evolved business models that combine products and services," "co-creation with our partners," "improved energy efficiency," and "expanded use of renewable energy."

Amid these initiatives, the OMRON Group analyzed risks and opportunities based on two scenarios as announced by the Intergovernmental Panel on Climate Change (IPCC), the International Energy Agency (IEA), and others: one assuming a rise in global average temperature of 4°C or more, and the other assuming that the increase in global average temperature is kept to below 2°C (1.5°C in some cases) as agreed under the Paris Agreement. We reaffirmed that we must act to solve climate change issues.

Specifically, in the field of industrial automation, we will develop innovative-Automation to establish manufacturing sites that support a sustainable future of job satisfaction and

harmony with the environment, and will aim for automation that increases productivity and energy efficiency. In the field of social solutions, OMRON has already contributed to the spread of solar power generators and storage batteries. Moving forward, we will contribute to the further spread of renewable energy by eliminating instable generation through advanced energy control technologies. Additionally, in the field of device and module solutions, we will accelerate the development and supply of devices and modules in response to the growing interest in improving environmental performance and reducing the carbon footprints of products. OMRON connects with society in a variety of ways, and will contribute to the realization of a carbon-neutral society on multiple fronts. In fiscal 2022, OMRON became the first Japanese manufacturer to join the EP100, and declared its commitment to doubling "energy productivity," which is the ratio of sales per gigawatt-hour (GWh), at all production sites of the Industrial Automation Business and the Healthcare Business by 2040 compared to 2016. At the Matsusaka Factory, which is a production base for blood pressure monitors and thermometers in Japan, the Industrial Automation Business and the Healthcare Business are working together to create a system to double production while reducing energy consumption.

[➔ SF2030 Topics "Achievement of Carbon Neutrality"](#)

#### Company-wide Sales Targets and Progress in Contributing to Carbon Neutrality through our Businesses

In fiscal 2023, company-wide sales contributing to carbon neutrality (Green Revenue) amounted to JPY 102.4 billion. Given the revision to performance forecasts, we have revised our earlier target for fiscal 2024 to JPY 116.0 billion (The original target for SF 1st Stage was JPY 130.0 billion).

**Risk Management**

**Processes for Assessing, Identifying, and Managing Risk**  
 OMRON conducts scenario analysis for each business to identify a comprehensive set of “transition risks” and “physical risks” related to climate change. We then visualize the “time horizon” and “amount of impact on business and finances” of each of the extracted climate-related risks for each adopted scenario, and evaluate the degree of impact on business and finances. Based on the assessment, we identify climate-related risks that are significant to the OMRON Group, incorporating these results into company-wide risk management as integrated business risk. Important matters related to risk identification and formulation of countermeasures are reported to the Board of Directors. In fiscal 2023, we confirmed that the scenario analysis outcomes for IAB, HCB, DMB, and SSB remained unchanged. Additionally, we verified that the Structural Reform Program NEXT 2025 will not alter the results of scenario analysis for

each business. For the Data Solutions Business (DSB), which was established in December 2023, we will incorporate it into the scope of scenario analysis and plan to conduct this analysis in conjunction with the next medium-term management plan (SF 2nd Stage).

**Status of Integration into Group-wide Risk Management**

Recognizing the importance of establishing a system to manage risks on a Group-wide basis, OMRON is implementing integrated risk management under a common framework throughout the Group. We identify and assess climate-related risks as significant risks for the Group and monitor risk management by aligning these risks with the risks identified by scenario analysis.

**Indicators and Targets**

**Indicators for Climate-related Risks and Opportunities**

We have established indicators for Scope 1, 2, and 3<sup>1</sup> GHG

emissions and for renewable energy as a percentage of electricity used in our business activities. We use these indicators to manage risks and business opportunities.

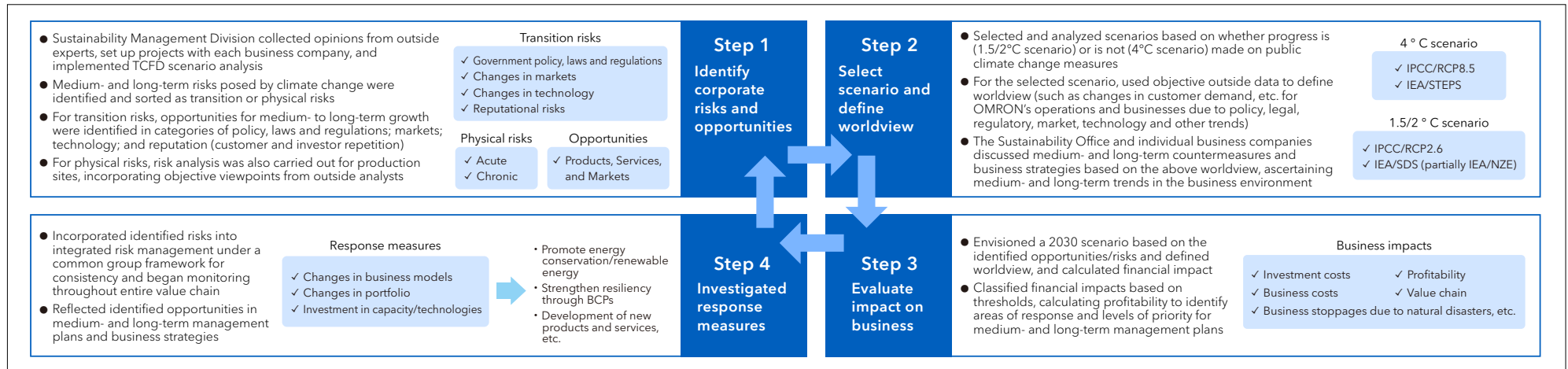
**Targets and Results of GHG Emissions (Scope 1, 2, and 3)**

OMRON believes that creating an environmentally sustainable society corresponds to the OMRON Principle of “contributing to a better society,” and set the OMRON Carbon Zero target in July 2018, aiming to reduce GHG emissions in Scope 1 and 2 to zero by 2050.

For Scope 1 and 2 and Scope 3, Category 11, we have set 2030 targets, each of which has been certified by the SBTi as 1.5°C and 2.0°C pathway targets, respectively\*. In an effort to achieve these targets, OMRON aims to achieve Carbon Zero for Scope 2 at our sites in Japan by fiscal 2024, utilizing the renewable electricity-derived J-Credit Scheme provided by our energy solutions business and self-consignment, while continuing efforts to improve energy efficiency.

\*The 2030 targets for Scope 1 and 2, as well as Scope 3, will be reviewed in 2027 in accordance with the SBTi standards

**Scenario Analysis Steps**



### Evaluated Business and Financial Impacts of Climate Change

- Assumed period: Period covered by SF2030 (through fiscal 2030)
  - Adopted scenarios:
    - 4°C Scenario: IPCC/RCP8.5, IEA/STEPS
    - 1.5/2°C Scenario: IPCC/RCP2.6, IEA/SDS (portions of IEA/NZE)
  - Time horizon: Short-term: less than 3 years; Medium-term: 3 to 10 years, Long-term; 10 to 30 years
  - Scenario analysis targets: Industrial Automation Business, Healthcare Business, Social Systems, Solutions and Service Business, and Device & Module Solutions Business
  - Definition of business and financial impact (large, medium, and small)
- <Impact on risk: Positive or negative impact on operating income>

Large	We expect ongoing regulations, policies, etc. on climate change at our customers, markets, etc., to have an impact in the future, resulting in an estimated impact on operating income of JPY 10.0 billion or more per year.
Medium	A change in response to climate change is already ongoing among customers and markets. We expect ongoing impacts to continue. However, we expect responses to change over the medium to long term, depending on whether consumers are accepting and on judgments related to return on investment. As a result, we expect the impact on operating income to be between JPY 3.0 billion and JPY 10.0 billion per year.
Small	An awareness change against climate change is already ongoing among our customers, markets, etc. However, we expect the medium- to long-term impact to be limited. As a result, we estimate the impact on our operating income to be less than JPY 3.0 billion per year.

\*The impact is defined as a positive or negative impact on operating income. Impact is defined as the response to the identified risk/opportunity.

### Overview of the OMRON Group's climate-related risks and opportunities and responses

Type of Risk	Time horizon	Risk Overview	Business and financial impact		Response to risks	Type of opportunities	Time horizon	Overview of opportunities	Business and financial impact		Response to risks
			1.5°C/2°C	4°C					1.5°C/2°C	4°C	
Transition	Government policy and regulations	Medium term	- Increase in business costs (introduction of carbon tax, emissions trading, circular economy regulations, etc.) as a result of complying with climate change regulations	Small	Small	Industrial Automation Business	Short to medium term	Increased opportunities to provide factory automation equipment in the following business fields: [By field] - Digital devices: Increased demand for semiconductors to support the spread of environmentally friendly vehicles and EVs - Environmental mobility: Increased demand for EV-related components such as rechargeable batteries and for EVs - Food and daily necessities: Increased demand for environmentally friendly packaging materials such as plastic-free packaging materials to realize a decarbonized society - Growing need for decarbonization of production processes	Large	Medium	- Providing innovative-Automation solutions to the needs associated with production method changes, new capital expenditure, and enhanced energy productivity at production sites
	Markets and technology	Short to medium term	- Increased competition in areas related to decarbonization, such as improving the environmental performance of products and reducing the carbon footprint of products	Small	Small	Healthcare Business	Short to medium term	Increased demand for environmental performance due to the expansion of ethical consumption	Small	Small	- Capturing consumer demand by enhancing environmental performance (carbon reduction, circular economy, etc.)
	Reputation	Short to medium term	- Changes in reputation due to inability to meet customer needs - Changes in investor evaluation due to poor performance attributable to inability to capture the needs associated with the resolution of environmental issues	Small	Small	Social Systems, Solutions and Service Business	Short term	Increased needs for renewable energy creation and energy management in response to decarbonization, rising electricity prices, and disaster countermeasures [Common] - Acceleration of the models toward private energy creation, storage, and use, due to the expansion of the renewable energy, energy storage, and energy management markets - Expanded demand for solar power generation systems and power conditioners as their installation is made obligatory or given preferential treatment by municipal ordinances - Expanded demand for bi-directional charging systems and energy supply-demand control systems for EVs in response to increased natural disasters and soaring electricity prices [By field] - Households (housing): Increased demand for private power generation and storage battery systems due to preferential measures by municipal governments and the need for more robust measures against natural disasters - Business/industry: Increased demand for solar power systems and energy supply-demand control systems due to accelerated decarbonization	Medium	Small	- Expanding sales of PV inverters and storage batteries further in the energy management markets that utilize solar and other renewable energy sources - Securing V2X and other new technologies in the energy management market
	Physical	Acute	Short term	- Suspension of production facilities and procurement of parts and materials at sites and partner factories due to increased severity of natural disasters (flooding, torrential rain, water shortages, etc.)	Small*	Small*	Device & Module Solutions Business	Short to medium term	Increased opportunities to provide electronic and mechanical components because of the following: [Common] - Increased interest in enhancing the environmental performance of products and reducing their carbon footprint [By field] - Home appliances: Increased demand for air conditioning systems due to rising average temperatures and increased demand for air conditioners with inverters due to the need to strengthen measures to reduce GHG emissions associated with product use, leading to increased demand for DC current interruption - Power tools: Accelerated shift to electric tools due to the need to strengthen measures to reduce GHG emissions associated with product use, leading to increased demand for DC current interruption - FA: Increased demand for new FA equipment installment and replacement as a result of increased demand for new products (EVs, next-generation power semiconductors, recycled plastics, alternative foods, etc.) and the progress of decarbonization of production processes	Small	Small

\* We analyzed physical risks using hazard maps and AQUEDUCT for 15 major production centers, mainly in Japan and China. Although it is clear that two centers would be exposed to risk in the event of a once-in-a-century disaster, the annual impact, taking into account the replication period, is extremely small for both the 1.5/2°C and 4°C scenarios. Therefore, we rated the impact as small.

SF2030 Topics

## “Achievement of Carbon Neutrality”

### Achievement of Carbon Neutral Production through Cross-Business Initiatives

For the “achievement of carbon neutrality,” which is being tackled under SF2030, OMRON aims to realize a society that balances safe, secure, and convenient lifestyles with environmental preservation. For instance, we envision a future where the widespread use of renewable energy enables households to live harmoniously with nature, generating, storing, and utilizing electricity as part of their daily routine. To bring this vision to life, we develop and deliver to the public power conditioners and energy storage systems for solar power generation systems. OMRON’s contributions extend beyond the promotion of renewable energy; we are also focused on sustainable manufacturing initiatives, including calculating PCF for each product and verifying GHG emissions across the supply chain. In order to realize sustainable manufacturing, it is important not only to reduce GHG emissions but also to enhance productivity and keep increasing economic value. OMRON believes that realizing both the “achievement of carbon neutrality” and “Increasing productivity” is the social issue whose solution we should contribute to. Based on this idea, the OMRON Group became the first Japanese manufacturer to join the EP100, pledging to double “energy productivity,” which is the ratio of sales per gigawatt-hour (GWh), at all production sites of the Industrial Automation Business and the Healthcare Business by 2040 compared to 2016. Accordingly, we are working on initiatives that prioritize “energy productivity,” that is, increasing productivity to boost production volume while reducing energy consumption. Presented below is a case study of the Matsusaka Factory of the Healthcare Business (HCB), which

exemplifies this approach. (See [Figure 1](#)).

### A Project to Increase Energy Productivity through Collaboration among Businesses

At the Matsusaka Factory, which is a production base for blood pressure monitors and thermometers in Japan, they have chosen three keywords of “Reduce,” “Create,” and “Absorb” as they work toward the realization of carbon neutrality. They aim to “reduce” CO<sub>2</sub> emissions by lowering energy consumption, “create” clean energy that does not produce CO<sub>2</sub>, and “absorb” CO<sub>2</sub> that remains to be reduced to achieve net-zero emissions. (See [Figure 2](#)) The principal focus is on reducing CO<sub>2</sub> emissions, where IAB and HCB are collaborating to increase energy productivity.

### Providing Insights to Employees to Encourage Improvement through “Visualization”

We at the Matsusaka Factory began by visualizing energy consumption using i-BELT Data Management Platform (i-DMP), a data utilization platform implemented by IAB. As illustrated in Figure 1, i-DMP displays factors that lower energy productivity in a simple, easy-to-understand format. This is because even if a large amount of information is visualized, it does not necessarily work positively. If it is hard for front-line workers to identify significant information within the big data, it could prevent them from making improvements instead. With i-DMP offering clear, simple data points, all team members are aware of the need to reduce energy consumption while improving productivity. This awareness helps identify the next issues to tackle, effectively motivating employees who are charged with the mission to increase energy productivity. What follows is a story of how this visualization approach bore fruit.

Figure 1 Increasing Energy Productivity Solves Manufacturers’ Dilemma

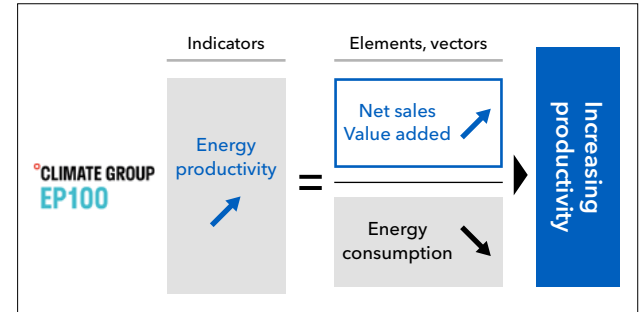
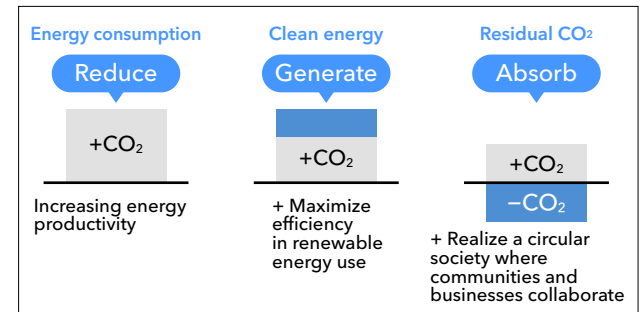


Figure 2 Three Keywords at the Matsusaka Factory





**Combining Insights-driven Improvement and IAB’s Advanced Control Technology to Reduce GHG Emissions at Each Process by Half**

On the board mounting line, which involves soldering, energy is constantly consumed to maintain high temperatures, even when equipment is idle. Improvements had been made before, but further progress was realized after visualizing the production status of each equipment alongside energy consumption over time. Through discussions and analysis based on actual data, front-line members realized there was still room for improvement. This insight led to a behavior change in at the Factory, that is, improving the way of feeding the boards to the line, thus optimizing downtime use and enhancing production efficiency. Ultimately, productivity increased by 40% through reduced downtime and enhanced uptime. There was another issue to address concerning the equipment itself: each time it was turned off, it required 60 to 90 minutes to return to stable, high-temperature operation, adding extra downtime instead. So, we asked IAB to share their technology and know-how and introduced a control system that predicts the time taken to restore based on seasonal variation and production data. While the system is still being verified, it is expected to reduce energy consumption by approximately 20%. This improvement is projected to increase energy productivity by 75% and reduce CFP by 42.9%. (See [Figure 3](#) )

We also applied the platform to our blood pressure monitor assembly line for improvement. Blood pressure monitors are assembled both automatically and manually. At our automated line, processes such as soldering inspection and transportation were optimized using automation techniques proven effective at the Ayabe and Kusatsu Factories, increasing productivity by 30%. Meanwhile, one-quarter of

the energy consumed at the Matsusaka Factory is used for air conditioning, and air conditioning energy used over the space for the assembly line was 2.5 megawatts per year. By amassing improvement know-how cultivated at each factory, the Factory successfully reduced the space required for the assembly line by 30%, as well as the energy consumed for air conditioning and lighting in the surplus space by an equivalent amount. The shorter distance between processes also reduced operator motion, increasing production efficiency by 30%. Together with the reduction in air conditioning energy, energy productivity increased by 85% overall, and CFP at the assembly line was reduced by 45.9%. (See [Figure 4](#) )

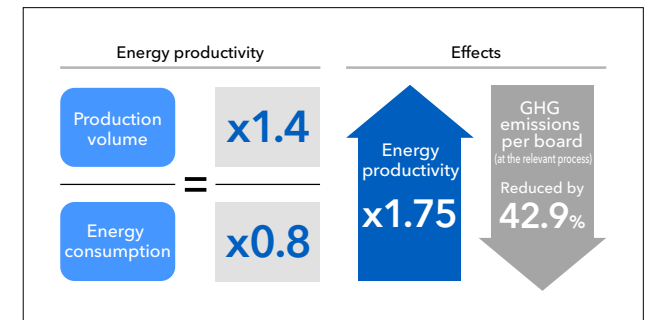
**Logistics Reform to Achieve Higher Energy Productivity and Lower Waste Production**

Our drive to make improvements did not stop at the production line but led to logistics reform as well. To begin with, we replaced out-of-Japan suppliers with Japanese ones and then switched to component suppliers in their vicinity to shorten the distance of transportation. This shift is estimated to cut GHG emissions related to component procurement by 3.4 tons. At the same time, the Matsusaka Factory achieved waste reduction by using “returnable boxes.” When imported, components arrived in durable cardboard boxes with thick buffer materials, resulting in 90 tons of waste annually. In switching to nearby suppliers, the Factory started using returnable boxes for transportation that directly go back and forth between the Factory and suppliers, which is only possible when sourcing from within the vicinity. The direct delivery cut unloading space, time and retained parts inventory, led higher energy productivity, and reduced waste of approximately 30 tons so far. Going forward, we will accelerate initiatives to focus on

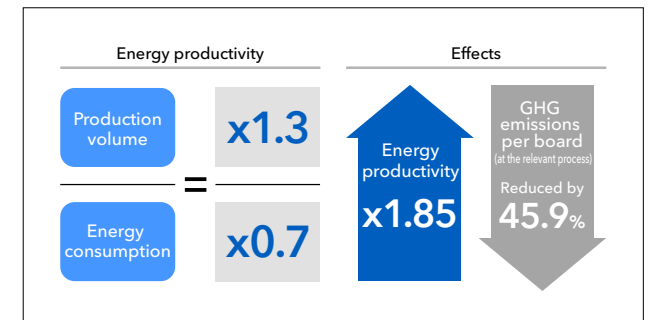
energy productivity improvements by utilizing field data while expanding clean energy initiatives. Moreover, we aim to share this know-how with global manufacturing customers, fostering sustainable manufacturing practices worldwide. OMRON will remain committed to realizing a society that balances safe, secure, and convenient lifestyles with environmental preservation.

[> OMRON’s Innovation in Energy Productivity from the Manufacturing Site](#)

**Figure 3** Improvement Effects at the Board Mounting Line



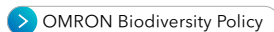
**Figure 4** Improvement Effects at the Blood Pressure Monitor Assembly Line



## Initiatives for Coexisting with Nature (Preserving Biodiversity)

### Revision of the OMRON Biodiversity Policy

Our everyday lives, economy, and well-being are built on biodiversity, which forms the foundation of life. Yet, biodiversity is facing a serious decline. Recognizing the conservation and restoration of biodiversity as a key challenge, OMRON established its Biodiversity Policy in 2010 and has been working on “Coexisting with Nature,” which is an important environmental issue to address as declared in the OMRON Environmental Policy. To further strengthen this initiative, we endorsed the concept of the Kunming-Montreal Global Biodiversity Framework, adopted in December 2022, which aims to achieve coexistence with nature and a nature-positive world, and revised the OMRON Biodiversity Policy in July 2024. In making the revision, we referred to key resources such as the disclosure recommendations and guidance by the Task Force on Nature-related Financial Disclosures (TNFD), a framework for disclosing risks and opportunities related to natural capital. Going forward, guided by the OMRON Biodiversity Policy, the OMRON Group is dedicated to biodiversity conservation, viewing it as part of both business risk management and a growth opportunity. By doing so, OMRON is committed to contributing to generating social and economic value and achieving a nature-positive future.



### What We Do

#### Commencing the Initiative for TNFD Recommended Disclosures

Since the second half of fiscal 2023, OMRON has been an active participant in the TNFD Forum, getting ready for disclosures as per TNFD recommendations. In fiscal 2024, we applied the LEAP approach to locate the state of nature around our production sites and evaluate our dependencies and impacts on natural capital. Based on the findings of “Locate (Interface with nature) and Evaluate (Dependencies & impacts), we will assess key risks and opportunities and disclose them accordingly.

	Locate: Interface with nature	Evaluate: Dependencies & impacts
What to assess	24 production sites	Industrial Automation Business, Device & Module Solutions Business
Scope of assessment	- Assessment of activity locations - Identification of priority locations	- Confirmation of industrial classification by business based on sales and other information - Assessment of sector-level dependencies and impacts - Careful review of assessment results based on the actual site status - Identification of high-priority dependency assets and impact drivers
Outputs	- Assessment findings of activity locations - List of priority locations	- Assessment results of dependencies and impacts - Identification of high-priority dependency assets and drivers

#### L: Interface with nature

In this phase, we assessed our production sites in terms of ecosystem integrity, importance of biodiversity, physical water risks, and soil contamination in order to identify priority locations.

Evaluation items	Evaluation tools	Evaluation indicators	Sites (with High risks or higher)
(1) Importance of biodiversity	IBAT <sup>*1</sup>	IUCN Red List, Protected Areas(National, Natura2000 Regional Seas, World Heritage, Ramsar, MAB, Emerald Network), KBA	Japan (Aichi, Tottori, Oita, Saga, Kumamoto, Kyoto, Shiga, Mie), Italy (Lonato), the Netherlands ('s-Hertogenbosch), Indonesia (Bekasi), Malaysia (Petaling Jaya), China (Shenzhen), the U.S. (Pleasanton, Renton), Brazil (Sao Paulo), Vietnam (Thu Dau Mot)
	Biodiversity Risk Filter <sup>*2</sup>	Protected/Conserved Areas, KBA, Other Important Delineated Areas, Range Rarity	
(2) Ecosystem integrity	Biodiversity Risk Filter	Ecosystem Condition	None
(3) Physical water risks (water stress, flood risks, water quality)	Aqueduct Water Risk Atlas <sup>*3</sup>	Baseline water stress Riverine flood risk, Coastal flood risk	China (Dalian, Shanghai), Indonesia (Bekasi) Japan (Aichi, Mie, Kumamoto), China (Dalian, Shanghai), Vietnam (Thu Dau Mot), Indonesia (Bekasi), the U.S. (Pleasanton)
	Water Risk Filter <sup>*4</sup>	Surface Water Quality Index	Italy (Frosinone, Lonato), the Netherlands ('s-Hertogenbosch), China (Dalian, Shanghai), Brazil (Sao Paulo)
(4) Soil contamination	None	Investigation/analysis by OMRON	None

<sup>\*1</sup> IBAT: Integrated Biodiversity Assessment Tool developed by the UN Environment Programme (UNEP). For the purposes of this report, the number of species within 50km of the site is measured.  
<sup>\*2</sup> Biodiversity Risk Filter: Developed by the World Wide Fund for Nature (WWF), this tool helps assess biodiversity-related risks and opportunities across the value chain  
<sup>\*3</sup> Aqueduct Water Risk Atlas: Provided by the World Resources Institute (WRI), this tool helps identify and assess water risks around the world.  
<sup>\*4</sup> Water Risk Filter: Co-developed by WWF and the German financial institution DEG, this tool helps identify and assess risks associated with the water environment.

What We Do

E: Dependencies & impacts

With businesses spanning Industrial Automation, Device & Module Solutions, Healthcare, and Social Systems, Solutions and Service, OMRON is involved in various manufacturing sectors. In fiscal 2023, we prioritized assessing the Industrial Automation Business and the Device & Module Solutions Business based on business scale and site number. We then identified target sectors according to the sales composition ratios of products representing these two businesses, and evaluated their dependencies and impacts using ENCORE\*. The analysis found that scores for water-related (groundwater and surface water), pollution-related (water pollutants, soil pollutants, and solid waste), and others (noise, light) categories were rated Medium or above. (See Table 1 and 2). Based on this analysis, we concluded that the key high-priority dependencies/impacts are related to groundwater and surface water only.

[Water-related]

At OMRON's production sites, most water withdrawals come from third party suppliers and are primarily used for domestic purposes. As such, we assume that our direct dependencies on groundwater and surface are actually smaller than what ENCORE says. However, considering that "using water resource effectively" is part of the "Coexisting with nature," which is one of the key environmental issues laid out in the OMRON Environmental Policy, we have determined that addressing dependencies on groundwater and surface water remains a high priority.

[Pollution-related]

At all our production sites, OMRON conducts Phase 1 surveys (initial surveys including written surveys, interviews, and on-site reviews) to carry out qualitative risk analysis. At some sites, we conduct Phase 2 surveys (soil and groundwater research) to analyze potential risks. Based on these analyses, we have found no evidence of soil contamination at any of our production sites or their surrounding areas, allowing us to conclude that the risk of soil contamination is minimal. Furthermore, OMRON mainly performs assembly at its production process and rarely uses liquid chemical substances. As such, we assume that our impact on soil, groundwater, and solid waste pollution is smaller than what ENCORE says.

[Others]

Likewise, based on our site environmental performance data, we believe that the impacts of noise and light pollution are smaller than indicated by ENCORE.

\* ENCORE: Exploring Natural Capital Opportunities, Risks and Exposure. Developed by the UNEP World Conservation Monitoring Centre, this tool assesses risks associated with biodiversity.

Table (1) Evaluation results (Dependencies)

Business	Industrial classification	Direct physical input					Production process						Mitigating direct impacts				Protection from disruption					
		Animal-based energy	Fibers and other materials	Genetic materials	Groundwater	Surface water	Maintains nursery habitats	Pollination	Soil quality	Ventilation	Water flow maintenance	Water quality	Bio-remediation	Dilution by atmosphere and ecosystems	Filtration	Mediation of sensory impacts	Buffering and attenuation of mass flows	Climate regulation	Pest control	Disease control	Flood and storm protection	Mass stabilization and erosion control
Industrial Automation	Electronic devices/equipment	—	—	—	Medium	Medium	—	—	—	—	—	—	Low	—	—	—	—	—	—	—	—	—
	Electronic components/facilities	—	—	—	Medium	Medium	—	—	—	—	—	—	Low	—	—	—	—	—	—	—	—	—
Device & Module Solutions	Electronic devices/equipment	—	—	—	Medium	Medium	—	—	—	—	—	—	Low	—	—	—	—	—	—	—	—	—

Table (2) Evaluation Results (Impacts)

Business	Industrial classification	Change in use of land, water, and oceans			Resource development		Climate change	Pollution				Others
		(1) Terrestrial ecosystem use	(2) Freshwater ecosystem use	(3) Marine ecosystem use	(4) Water use	(5) Other resource use	(6) GHG emissions	(7) Non-GHG air pollutants	(8) Water pollutants	(9) Soil pollutants	(10) Solid waste	(11) Disturbances
Industrial Automation	Electronic devices/equipment	—	—	—	—	—	—	—	High	High	Medium	Medium
	Electronic components/facilities	—	—	—	—	—	—	—	High	High	Medium	Medium
Device & Module Solutions	Electronic devices/equipment	—	—	—	—	—	—	—	High	High	Medium	Medium