



# SUSTAINABILITY ACTIVITIES (ESG)

## Environment

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## Environment Policies and Targets

### Mitsubishi Estate Group Medium- to Long-Term Greenhouse Gas Emissions Reductions Targets (SBT-Approved)

The Mitsubishi Estate Group formulated group-wide medium- to long-term greenhouse gas (GHG) emissions reduction targets in March 2019. In April 2019, the Group's targets were approved by the Science Based Targets initiative as consistent with the level required under the Paris Agreement (limiting average global temperature rise due to climate change to well below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C) based on scientific evidence. Moreover, in March 2022, the Group revised its targets in line with the Net-Zero Standard published by the SBTi in October 2021 based on its 1.5°C scenarios (Targets approved by the SBT initiative in June 2022). The Group will further deepen its initiatives through such means as introducing electricity derived from renewable energy and utilizing new technologies, thereby contributing to the realization of a low carbon footprint society.



\* The Science Based Targets initiative is a joint initiative by the World Wide Fund for Nature (WWF), CDP (an international NGO that provides investors, companies, cities, states and regions with a global disclosure platform to manage their environmental impacts), UN Global Compact, and the World Resources Institute (WRI). The initiative encourages companies to set greenhouse gas emissions reduction targets based on scientific evidence, which are consistent with the level required under the Paris Agreement (limiting average global temperature rise due to climate change to well-below 2°C above pre-industrial levels and pursuing efforts to limit warming to 1.5°C.)

### Mitsubishi Estate Group Medium- to Long-Term Greenhouse Gas Emissions Reductions Targets

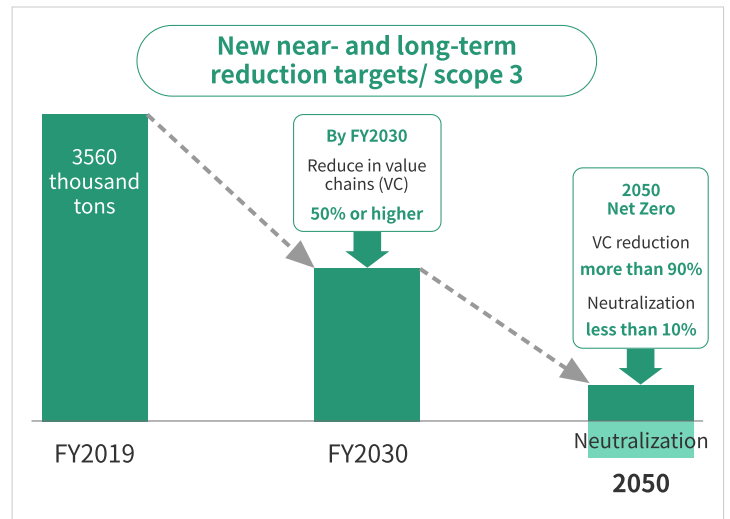
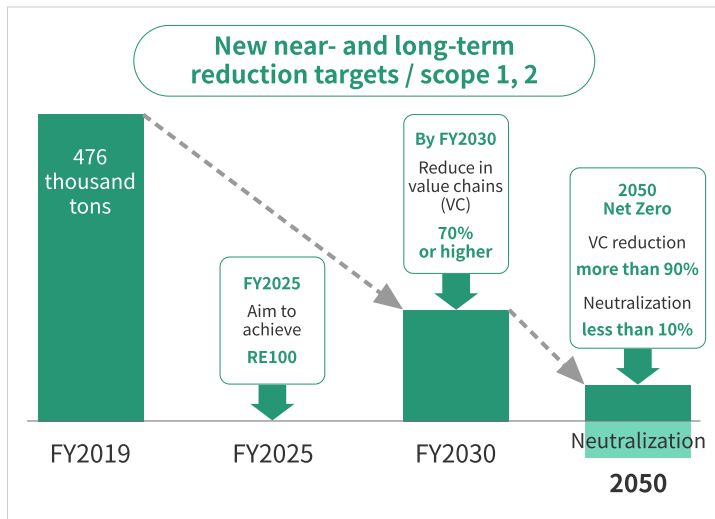
#### GHG Emissions Reduction Targets (revision in March 2022) (Targets approved by the SBT initiative in June 2022)

- Reduce Scope 1 + 2 by 70% or more and Scope 3 by 50% or more by fiscal 2030 compared to fiscal 2019 emissions
- Achieve net-zero emissions by 2050 (reduce Scope 1, 2, and 3 by 90% or more. Neutralize residual emissions\*)

\* Emissions that remain unabated within the value chain in the target year are termed "residual emissions." The SBTi standard requires neutralizing any residual emissions using forest absorption and carbon removal technologies outside the value chain to counterbalance the impact of these unabated emissions and to achieve net-zero emissions.



## Based on SBTi's new Net-Zero Standard (1.5°C scenario)



See the following for data on greenhouse gas emissions.

[ESG Data > Environmental Data](#)



## Formulating Target for 100% Renewable Energy Rate in Conjunction with RE100 Commitment

On January 31, 2020, Mitsubishi Estate joined RE100\*, a collaborative initiative under which businesses commit to using 100% renewable energy. In March 2022, Mitsubishi Estate revised its GHG reduction targets in line with the SBTi's Net-Zero Standard and, in conjunction with these revisions, also renewed the Group's renewable energy rate target to achieve 100% group-wide by fiscal 2025.



\* RE100 is a global corporate initiative led by The Climate Group, an international NGO working to accelerate climate action, in partnership with CDP, an international NGO that provides investors, companies, cities, states and regions with a global disclosure platform to manage their environmental impacts. RE100 brings together influential businesses committed to switching to 100% renewable energy for the electricity they use.



# Mitsubishi Estate Group Basic Environmental Policy

The Mitsubishi Estate Group has established the Mitsubishi Estate Group Basic Environmental Policy, which is based on its corporate mission. The entire Group works together to implement sound environmental management.

The Mitsubishi Estate Group has developed an environmental management system and strives to protect the environment by promoting environmental initiatives and reducing environmental impact, as well as complying with all environmental laws and regulations. Mitsubishi Estate is determined to ensure that its business activities play a leading role in the development of sustainable communities.

## 1. Building a low-carbon society

We are proactive about the efficient use of resources and energy, and encourage the use of renewable energy to contribute to the creation of a low-carbon society.

## 2. Creating a sound material-cycle society

We strive to reduce, reuse, and recycle in every stage of our business, including planning, development, design, construction, management and dismantlement, in order to contribute to building a sound material-cycle society.

## 3. Fostering harmony between nature and human society

We endeavor to foster new cultural values and to practice environmental responsibility by demonstrating concern for biodiversity and developing attractive urban spaces that harmonize with the surrounding natural environment, thus helping to build a society that lives in harmony with nature.

## 4. Promoting environmental communication

We proactively provide information on the environment and communicate with society on a broad range of issues in our efforts to coordinate and cooperate with a wide range of stakeholders.

## 5. Increasing employees' ecological awareness

In our efforts to increase employees' awareness of environmental conservation issues and ensure highly effective environmental activities, we provide environmental education and awareness programs, aiming to develop an ecologically aware workforce.

Established on May 1, 2004

Revised on January 1, 2006 and April 1, 2010



# The Mitsubishi Estate Group Green Procurement Guidelines

The Mitsubishi Estate Group established the Green Procurement Guidelines as an active effort to be environmentally friendly and help reduce the burden on the global environment. The Guidelines promote green procurement, which refers to procurement or construction methods that use materials and equipment with a low environmental impact.

These Guidelines apply to all products, services, designs and construction work procured by the Mitsubishi Estate Group.

In April 2016, the Group also drew up the Paper and Printed Matter Procurement Guidelines to further those efforts.

The basic policies set out in the Green Procurement Guidelines are as follows.

**01** Conservation of Energy and Resources

**02** Reduction of Environment Pollutants

**03** Preservation of Biodiversity

**04** Long-Term Usability

**05** Recyclability

**06** Use of Recycled Material

**07** Ease of Treatment and Disposal

**08** Curtailment of Total Volumes Procured

[Green Procurement Guidelines \(PDF 97KB\)](#)

[PDF](#)



## Environment Promotion System

### Environmental Promotion System

The Mitsubishi Estate Group sets out matters related to efforts to promote sustainability, including conservation of global environment, in the Mitsubishi Estate Group Sustainability Regulations. The Sustainability Committee, chaired by the President & CEO of Mitsubishi Estate with the Chief Sustainability Officer (the director in charge of the Sustainability Management and Promotion Department at Mitsubishi Estate) as deputy chair, meets twice a year as a rule to deliberate and report on climate change and other important issues related to sustainability. Prior to meetings of the Sustainability Committee, the Sustainability Subcommittee conducts preliminary discussions and reporting and compiles information on efforts to promote sustainability taken by business groups, etc. The deliberations of the Sustainability Committee are reported to and supervised by the Board of Directors.

### Monitoring Group-Wide Environmental Initiatives

To monitor the progress of environmental initiatives across the entire Mitsubishi Estate Group, a survey is taken of all Group companies that share the Code of Conduct. The survey covers the progress of measures to reduce environmental impact.

### Building and Implementing an Environmental Management System

Mitsubishi Estate has each of its Group companies implement an environmental management system (EMS), a mechanism for responding to global environmental problems and contributing to the sustainable development of society.

EMS provides companies with a framework to help achieve environmental goals effectively by setting specific targets and assessment systems and utilizing the PDCA cycle to ensure continual review and improvement. The Mitsubishi Estate Group establishes targets and works to improve its environmental performance by obtaining certification for ISO 14001, the international EMS standard, as well as establishing its own EMS, which complies with ISO 14001.



## Implementation of Mitsubishi Estate Group's Environmental Management System (Status as of March 2022)

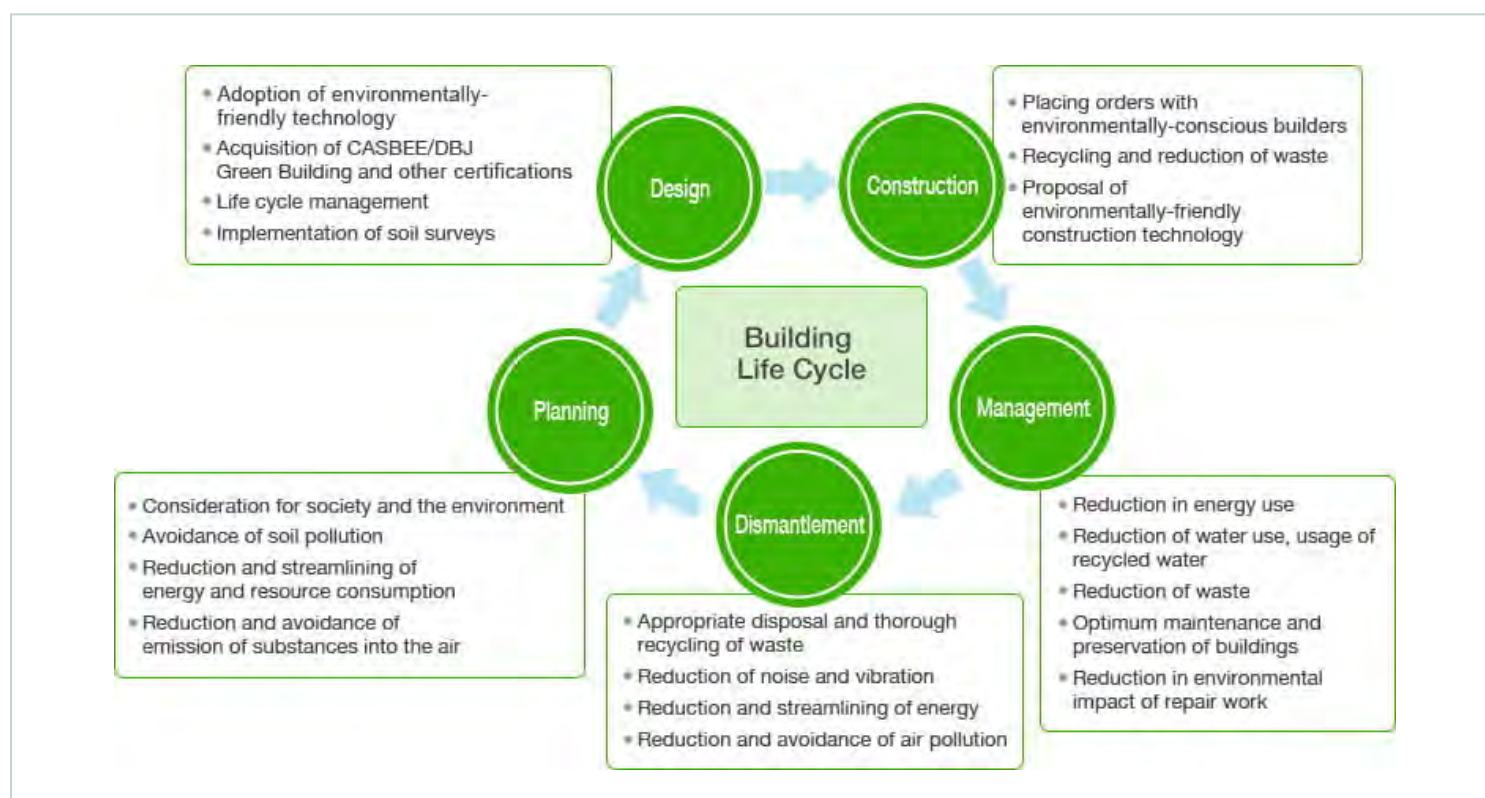
Organization	Environmental Policy	Environmental Targets and Initiative Results
Mitsubishi Jisho Design (Architectural design & engineering business)*	PDF 46KB <a href="#">PDF</a>	PDF 30KB <a href="#">PDF</a>
Mitsubishi Jisho Community (Overall condominium and building management)	PDF 19KB <a href="#">PDF</a>	PDF 39KB <a href="#">PDF</a>
Royal Park Hotels and Resorts (Supervision and management of hotel business management, operation support)	PDF 61KB <a href="#">PDF</a>	PDF 45KB <a href="#">PDF</a>
Yokohama Sky Building (Office and commercial building administration and management)	PDF 330KB <a href="#">PDF</a>	PDF 95KB <a href="#">PDF</a>
Mitsubishi Estate Home (Custom-built housing business)	PDF 21KB <a href="#">PDF</a>	PDF 62KB <a href="#">PDF</a>

\* ISO14001-certified organization

## Approach to Building Life Cycle

The Mitsubishi Estate Group runs various businesses involved in the development, planning, construction and management of real estate and considers reducing environmental impact through Group-wide efforts as one of its duties. The Group Basic Environmental Policy aims to reduce the burden on the environment caused by buildings throughout their life cycle, from planning and design to operation and management and dismantlement. The entire Group works together to implement constructive and sustainable measures to that effect.

### Environmental considerations during a building's life cycle





# Environment

## Information Disclosure Based on TCFD Recommendations

On February 3, 2020, Mitsubishi Estate announced its support for the recommendations of TCFD. In May 2020, the Company disclosed such information as governance, strategies, risk management, indicators and targets on climate change risks and opportunities in accordance with the framework recommended by TCFD. Going forward, the Company will consider expanding the scope of information to be disclosed as it works to further improve governance and business strategies pertaining to climate change based on the results of the scenario analysis.



Our disclosures based on TCFD recommendations, we primarily refer to the following scenarios.

- RCP 8.5
- IEA STEPS
- IEA SDS
- IEA 2DS

\* The Task Force on Climate-related Financial Disclosures (TCFD) was established by the Financial Stability Board (FSB) based on a G20 request to investigate how to disclose climate-related information and respond to financial institutions. The task force issued its final report in June 2017, encouraging companies and others to disclose climate change-related risks and opportunities.

In the "Information Disclosure Based on TCFD Recommendations" document, (4) Metrics and Targets will be changed in accordance with the revision of the Mitsubishi Estate Group medium- to long-term greenhouse gas emissions reductions targets figures in March 2022.

Please click [here](#) for details.

Information Disclosure Based on TCFD Recommendations (PDF 1.1MB)







# Climate-related risk assessments

Risks	Relevance and inclusion	Details
Current regulation	Relevant, always included	<p><b>[An example of the risk type]</b> Tokyo Cap-and-Trade Program: Japan's first mandatory emissions trading scheme The Tokyo Metropolitan Government has in place the Tokyo Cap and Trade System, which applies to large-sized businesses. Subject businesses are required to reduce CO2 emissions by 15% against the base year over a 5-year period, and if it is not achieved, a company is obliged to purchase carbon credits. Non-complying companies are subject to a fine, in addition to bearing the costs for related administrative measures, as well as having their names disclosed. Therefore, it is considered to be a crucial risk in terms of reputation and finance.</p> <p><b>[An explanation of how it is included in climate-related risk assessments]</b> Each business group and group company conducts risk assessments to identify important risks each year, and respond to priority risks (individual priority risks). In addition, line staff departments monitor the progress, cooperate and support the risk management at each group company. With regard to the individual priority risks selected, the Sustainability Committee and the Risk Compliance Committee, chaired by the president, accurately grasp the risks of the entire group, and visualize the risks and their priorities by identifying and mapping risks that need to be addressed intensively. Current regulatory risks (Tokyo Cap &amp; Trade System) are also evaluated, managed, and addressed in cooperation with the department in charge. As for emission reductions, the company is planning to introduce renewable energy at an early stage, in accordance with the targets of SBT and RE100. Specifically, for the purpose of facilitating reviews by business divisions and managing their progress appropriately, the annual plan since the end of FY2019 contains targets and action plans related to climate change and to be monitored semiannually by the Sustainability Committee.</p>
Emerging regulation	Relevant, always included	<p><b>[An example of the risk type]</b> In the scope of our company's business, when new emission regulations are implemented to achieve the Paris Agreement etc., additional measures and costs such as introduction of new energy-saving equipment and switching of energy sources may occur. Therefore, they are assessed as mid- and long-term financial risk. In particular, the impact is considered to be large in the scenario of 2°C or less, and in addition to purchasing additional emissions credits, the company sees indirect increases in construction costs due to higher costs of carbon-intensive building materials as a potential risk in the future.</p> <p><b>[An explanation of how it is included in climate-related risk assessments]</b> Such risks are evaluated, managed and controlled by the Sustainability Committee and Risk Management &amp; Compliance Committee chaired by the president, and countermeasures are implemented by constant monitoring in cooperation with the departments in charge in case any major change of regulations coming up. For instance, the third commitment period of mandatory Tokyo cap &amp; trade scheme is expected to start from 2020 to 2024. Our properties located in Tokyo are obliged to reduce CO2 emissions during the 5 years. If any property fails to meet such reduction obligation, additional expenditure will be required. Therefore, such risk is identified, evaluated and managed at the Sustainability Committee and Risk Management &amp; Compliance Committee and also monitored by the departments in charge. In addition, in order to respond to the introduction of emission regulations, the company is planning to introduce renewable energy at an early stage, in accordance with the targets of SBT and RE100. Specifically, for the purpose of facilitating reviews by business divisions and managing their progress appropriately, the annual plan since the end of FY2019 contains targets and action plans related to climate change and to be monitored semiannually by the Sustainability Committee.</p>



Risks	Relevance and inclusion	Details
Technology	Relevant, always included	<p><b>[An example of the risk type]</b> Although our company will not develop technologies with respect to facilities in our own buildings, there is a possibility that we cannot achieve our mid- and long-term targets and emission regulations when the energy efficiency of facilities and low-carbon technologies are not advanced as expected. In that case, additional costs may be required due to additional introduction of high-efficiency energy-saving equipment with poor cost-effectiveness. Therefore, they are assessed as mid- and long-term financial risks.</p> <p><b>[An explanation of how it is included in climate-related risk assessments]</b> Such risks are evaluated, managed and controlled by the Sustainability Committee and Risk Management &amp; Compliance Committee chaired by the president, and countermeasures are implemented by constant monitoring in cooperation with the departments in charge. For instance, as a result of assessment and management of technology risk, investment on Clean Planet Inc. whose business is R&amp;D of new energy has been made taking into consideration the use of energy in our facilities in the future. The long-term management plan to target 2030, which was announced in January 2020 (FY2019), sets targets and aims to develop new businesses in line with these targets in order to develop and manage real estate efficiently and effectively in response to technology risks.</p>
Legal	Relevant, always included	<p><b>[An example of the risk type]</b> It is expected that the Real Estate Companies Association of Japan will set voluntary target when the national GHG emission reduction plan is established in accordance with Japan's 26% emission reduction target announced at the COP 21. When such voluntary target is set, a pressure to reduce emissions would grow strong against us because we are owner of many large buildings and emit more GHGs than other companies, so that we may be forced more investment. Therefore, they are assessed as crucial financial risks. Legal risks are assumed to increase, especially at 2 degree C or below scenario.</p> <p><b>[An explanation of how it is included in climate-related risk assessments]</b> Such risks are evaluated, managed and controlled by the Sustainability Committee and Risk Management &amp; Compliance Committee chaired by the president, and countermeasures are implemented by constant monitoring of Japanese government and the world in cooperation with the departments in charge. In addition, in order to respond to the introduction of emission regulations, the plan for early reduction of emissions and introduction of renewable energy is being planned in accordance with the targets of SBT and RE100. Specifically, for the purpose of facilitating reviews by business divisions and managing their progress appropriately, the annual plan since the end of FY2019 contains targets and action plans related to climate change and to be monitored semiannually by the Sustainability Committee.</p>
Market	Relevant, always included	<p><b>[An example of the risk type]</b> While the preferences of consumer is changing toward low carbon buildings and energy efficient buildings, if we can't provide buildings our customers prefer, it may lead to lower occupancy rate, lower sales and lower corporate value evaluation. Therefore, they are assessed as crucial financial risks. In the future, our group will promote measures based on the SBT and RE100. However, if measures are not implemented under the scenario of 2 degree C or less, we believe that the risk of an increase in vacancy rate and a decrease in rent will be especially large.</p> <p><b>[An explanation of how it is included in climate-related risk assessments]</b> Such risks are evaluated, managed and controlled by the Sustainability Committee and Risk Management &amp; Compliance Committee chaired by the president, and countermeasures are implemented by constant monitoring of changes in customer demand and their financial impacts in cooperation with the departments in charge. In addition, we intend to promote measures based on the SBT and RE100 as a countermeasure against risks, and we believe that the CO2-free construction of buildings (introduction of renewable energy, construction of ZEB, etc.) should be particularly important.</p>



Risks	Relevance and inclusion	Details
Reputation	Relevant, always included	<p><b>[An example of the risk type]</b> While being required to disclose and respond to ESG-related information and issues, there is a possibility of losing confidence from investors unless we are able to respond to the transition to a carbon-free society. Since it leads directly to the stock price, it is assessed as a crucial financial risk. In addition, with the transition to a carbon-free society, there is a possibility that there will be a risk of criticism of buildings with low environmental performance. In such a case, the impact on the business (e.g. reduction of rent, prolongation of leasing period) and corporate value is expected.</p> <p><b>[An explanation of how it is included in climate-related risk assessments]</b> Such risks are evaluated, managed and controlled by the Sustainability Committee and Risk Management &amp; Compliance Committee chaired by the president, and countermeasures are implemented by constant monitoring of impacts on corporate values of ESG evaluation by third parties in cooperation with the departments in charge. In addition, we intend to promote measures based on the SBT and RE100 as a countermeasure against risks, and we believe that the CO2-free construction of buildings (introduction of renewable energy, construction of ZEB, etc.) should be particularly important. We believe that it is important to disclose information on these initiatives, disclose them appropriately to stakeholders, and accumulate dialogues.</p>
Acute physical	Relevant, always included	<p><b>[An example of the risk type]</b> Because of the occurrence of urban flood caused by the increase in the number of floods caused by climate change, there is a risk of loss of rent due to the inability of our property to operate. Therefore, it is assessed as a crucial financial risk. On the other hand, we are proud that we are implementing a higher level of countermeasures than other companies, such as implementing development with strict standards in terms of building hardware and implementing disaster prevention measures in terms of software, and we believe that risks can be minimized even in the event of flood damage.</p> <p><b>[An explanation of how it is included in climate-related risk assessments]</b> Such risks are evaluated, managed and controlled by the Sustainability Committee and Risk Management &amp; Compliance Committee chaired by the president, and countermeasures are implemented by constant monitoring of exposure risks to extreme weather affected by geographical aspects in cooperation with the departments in charge. Concrete examples of risk countermeasures include the installation of tide boards and ground floors such as disaster prevention centers.</p>
Chronic physical	Relevant, always included	<p><b>[An example of the risk type]</b> Necessity of changing the operation of air conditioning systems and renovating air conditioning systems in our buildings because of rising temperatures. New design of whole building structure to maintain comfort inside requires more investment. Therefore, it is assessed as a crucial financial risk. On the other hand, in our buildings, we assume that initiatives are already progressing to a certain degree and that additional costs will be small, and we estimate that the financial impact will be negligible.</p> <p><b>[An explanation of how it is included in climate-related risk assessments]</b> Such risks are evaluated, managed and controlled by the Sustainability Committee and Risk Management &amp; Compliance Committee chaired by the president, and countermeasures are implemented by constant monitoring of exposure risks to extreme weather affected by geographical aspects in cooperation with the departments in charge.</p>



# Environment

## Climate Change Strategies

### Basic Policy and Approach

The damage to human life and property caused by extreme weather events such as heat waves, heavy rain, and drought is becoming more serious each year.

The real estate industry is known to emit a particularly large proportion of greenhouse gases as a percentage of all industries. The Mitsubishi Estate Group, which owns a large number of properties in and outside Japan, recognizes it has a great responsibility, and considers it essential to address climate change in order to achieve the Mission of Mitsubishi Estate Group, which is to contribute to society through urban development.

It is against this backdrop that, in order to identify the impact of climate change on business activities and take appropriate actions, the Group endorsed the TCFD Recommendations in February 2020 and implemented analysis and information disclosure<sup>\*1</sup> in line with the TCFD information disclosure framework (governance, strategy, risk management, and metrics and targets around climate-related risks and opportunities). Based on the results of this analysis, the Group will further strengthen its governance and business strategies related to climate change in order to appropriately manage and respond to climate-related transition risks (including regulatory, technological, market, and reputation risks) and physical risks (acute and chronic risks).

Moreover, collaboration with a broad range of external stakeholders is essential for the Group as it implements initiatives aimed at realizing a carbon-free society. To this end, in April 2020, Mitsubishi Estate joined the Japan Climate Leaders' Partnership (JCLP)<sup>\*2</sup>, a coalition of companies acting against the climate crisis, and working to collaborate with other companies to enact policy proposals to the government with the aim of decarbonization.

The Mitsubishi Estate Group will respond steadily to climate change by deepening the initiatives it takes through its business activities in line with this basic policy and approach.

\*1 [Information Disclosure Based on TCFD Recommendations](#)

\*2 [JCLP website](#) 



# Goals and Achievement Status

## Goals

Under the basic policy and approach described above, the Mitsubishi Estate Group has formulated medium-to-long term reduction targets for the Group's overall greenhouse gas emissions (reductions in GHG emissions [Scope 1 + 2 + 3] of 35% by fiscal 2030 and 87% by fiscal 2050 compared with fiscal 2017. In April 2019, these targets were approved as being based on scientific evidence by the Science Based Targets (SBT) initiative. In March 2022, the Group revised its targets in line with the Net-Zero Standard published by the SBTi in October 2021 based on its 1.5°C scenarios (Targets approved by the SBT initiative in June 2022).



### GHG Emissions Reduction Targets (revision in March 2022) (Targets approved by the SBT initiative in June 2022)

- Reduce Scope 1 + 2 by 70% or more and Scope 3 by 50% or more by fiscal 2030 compared to fiscal 2019 emissions
- Achieve net-zero emissions by 2050 (reduce Scope 1, 2, and 3 by 90% or more. Neutralize residual emissions\*)

\* Emissions that remain unabated within the value chain in the target year are termed "residual emissions." The SBTi standard requires neutralizing any residual emissions using forest absorption and carbon removal technologies outside the value chain to counterbalance the impact of these unabated emissions and to achieve net-zero emissions.

### Renewable Energy Rate Target (revision in March 2022) Joined RE100

- Achieve 100% group-wide by fiscal 2025

In January 2020, Mitsubishi Estate made a commitment to switching to renewable energy for 100% of the electricity it uses and joined RE100, a global collaborative initiative aimed at switching to electricity derived from renewable energy for 100% of the electricity used in business. In March 2022, Mitsubishi Estate revised its GHG reduction targets in line with the SBTi's Net-Zero Standard and, in conjunction with these revisions, also renewed the Group's renewable energy rate target to achieve 100% group-wide by fiscal 2025.

# RE100



## Achievement Status

In order to achieve the targets above, the Group is implementing measures such as the use of high-efficiency equipment in the operation of office buildings, which is the Group's core business. In addition, given that factors such as external temperature and building operating conditions impact energy usage, we work with tenants to conserve energy and reduce GHG emissions. Moreover, we are switching the electricity used in buildings to electricity sourced from renewable energy, thereby reducing GHG emissions (Scope 2) and increasing the percentage of renewable power.

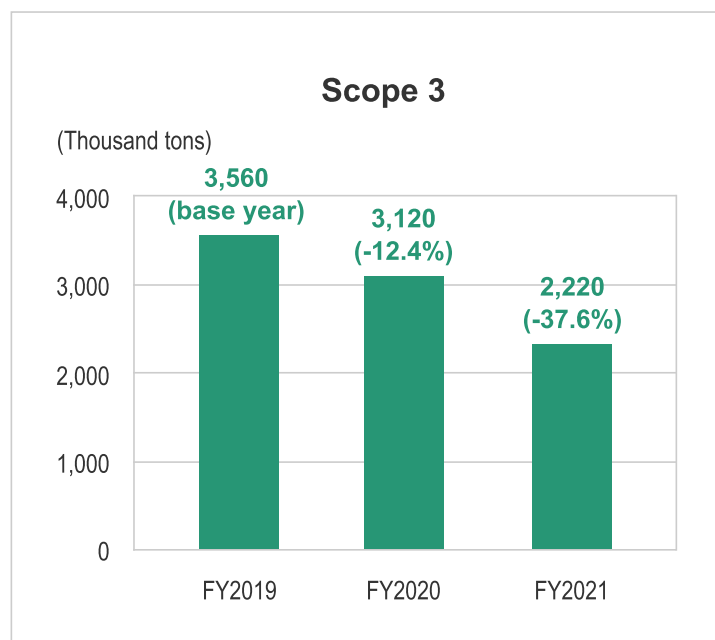
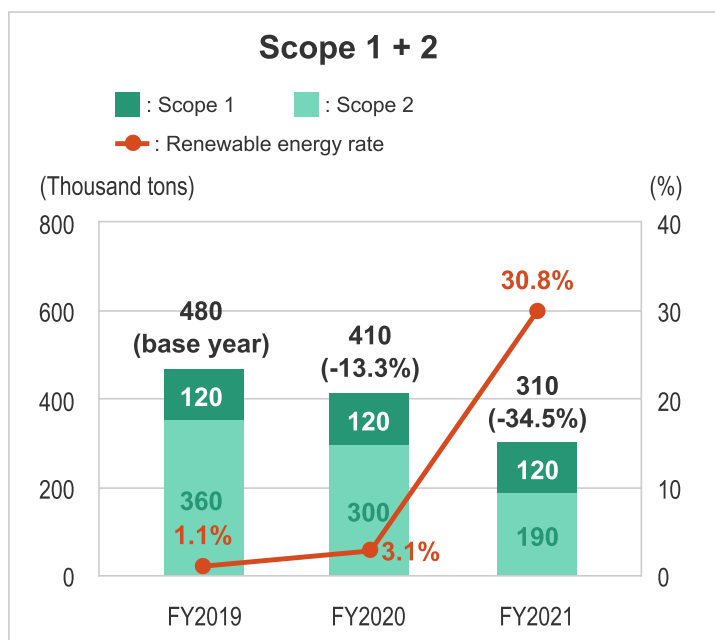
In fiscal 2021, Mitsubishi Estate introduced renewable power in 27 buildings, mainly in the Otemachi, Marunouchi, Yurakucho area, where the company owns and operates many buildings. It plans to introduce renewable power to all the buildings\* it owns and operates in the Tokyo metropolis and in Yokohama in fiscal 2022.

Since July 2022, Mitsubishi Estate has also been introducing RE100-compliant renewable power in all the office buildings it owns in Hiroshima City as well as switching to renewable power for all electricity used in the communal areas at the Group's Premium Outlet malls since June 2022. The company is also installing solar power facilities at its distribution facilities and the Premium Outlets to promote the use of sustainable energy and reduce GHG emissions.

The fiscal 2021 introductions increased the renewable energy rate to approximately 30% while the fiscal 2022 introductions are expected to increase the rate to around 50%, so the Group overall is aiming to achieve RE100 in fiscal 2025. This means the previously stated interim target of 25% by 2030 is achieved well ahead of schedule.

\* Office buildings and commercial complexes in which the Mitsubishi Estate Group has at least a 50% equity interest, excluding the capital recycling business and properties scheduled for redevelopment, etc.

### GHG Emissions, Including CO<sub>2</sub>, and Ratio of Electricity from Renewable Energy Sources



See the following for data on GHG emissions and the ratio of renewable power.

[ESG Data > Environmental data](#)





# Energy Management Initiatives

## Introducing "Super Tube" to Enhance District Heating-Cooling and Cogeneration Systems

Since Marunouchi Heat Supply began operating in 1976, it has developed a district heating-cooling network in the Otemachi, Marunouchi, Yurakucho area and supported energy management for the entire area. The steam and cold water generated by its plants are supplied to buildings through underground tunnels and used for air conditioning. Most of the buildings the Group owns in this area benefit from this system.

At the end of December 2020, Marunouchi Heat Supply and Mitsubishi Estate completed the "Super Tube," a 250-meter long culvert running north to south along Marunouchi Naka-Dori Avenue, and began supplying energy via this tunnel the following January. The Super Tube, which is 30 meters underground, is highly earthquake-resistant and the heat supply pipes inside it form an arterial network that will underpin the stable supply of energy in the Otemachi, Marunouchi, Yurakucho area. The supply of heat generated by the high-efficiency equipment at the Marunouchi Nijubashi Building plant through the Super Tube will reduce CO2 emissions and increase energy efficiency in the Yurakucho district.

With the construction of the Super Tube, the steam network linking the Marunouchi 1-chome, Marunouchi 2-chome, and the Yurakucho districts is now complete, and the mutual backup function between plants in an emergency has also been strengthened. Moreover, the effective use of unused heat is being promoted through the supply of exhaust heat generated by the cogeneration system to multiple buildings in the area through the steam network.

## Formulation of Smart Energy Urban Development Action 2050

In March 2021, Mitsubishi Estate and Marunouchi Heat Supply formulated Smart Energy Urban Development Action 2050, concentrating on the Otemachi, Marunouchi, Yurakucho area. The two companies will work on symbiotic and comprehensive energy policies that fully capitalize their management resources with the aim of next-generation urban development to maximize both environmental value and socioeconomic activity.

Central to Smart Energy Urban Development Action 2050 is the realization of an urban microgrid that will contribute to energy resilience, climate change countermeasures, and decarbonization in this area. The urban microgrid is a concept that integrates the use of self-owned power sources and renewable energy, which will be proactively brought in from outside. It also makes it possible to improve the efficiency of heat and power supply while making building energy consumption more efficient and smarter by maximizing the use of the district heating-cooling system. The creation of an urban microgrid contributes to climate change countermeasures and decarbonization during normal times, while also ensuring energy resilience to support business continuity in the area in the event of a major earthquake and other emergencies, thereby maximizing socioeconomic activity of this central business district.

In order to realize the urban microgrid, Energy and Urban Development Action 2050 sets out three management strategies. These consist of (1) Supply management strategy: improving overall efficiency through integrated heat and power supply system and decarbonization of electricity and heat; (2) Supply and demand management strategy: improving energy management efficiency through smarter energy consumption in new and existing buildings; and (3) Linkage and business management strategy: participating in renewable energy projects and contributing to regional revitalization, collaborating with diverse energy businesses on verification. Measures will be implemented in these three directions. In addition, the Urban Energy Strategy Planning Department was established at Mitsubishi Estate on April 1, 2021, as the organization for implementing the measures and promoting studies in this area.



## Outline of the Strategies

### (1) Supply Management Strategy

Decarbonization of electricity (proactive introduction of renewable energy)	We will proactively introduce renewable energy in order to drive decarbonization of electricity.
Decarbonization of heat and construction of optimum energy portfolio	Together with optimizing the combined heat and power portfolio, we will promote decarbonization of heat, which will contribute to the overall portfolio.
Business continuity based on integrated heat and power and self-owned power sources; enhanced efficiency through area supply control	In addition to building a system that can supply each building with heat and electricity in an integrated manner, we will establish an autonomous emergency system through the ownership and operation of self-sustaining power sources and further improve efficiency in normal times through area supply control.
Area supply management and load levelling control using demand response <sup>*1</sup> , heat and power storage, and VPP <sup>*2</sup> , etc.	We will build systems that will manage heat and power supply within the area effectively, including coordinated supply among buildings and time band leveling, utilizing demand response, power and heat storage, VPP and other methods.

\*1 Demand response: refers to changing power demand patterns by controlling energy usage volume on the energy consumer side

\*2 Virtual Power Plant (VPP): A cloud-based distributed power plant that uses information technology to aggregate the capacities of different distributed energy resources and function as if it were a physical power plant

### (2) Supply and Demand Management Strategy

An approach with long-term building stock in mind	We will manage from the perspective of the future building portfolio with an eye on the long-term rebuilding schedule in the area.
Making newly developed buildings emissions-free	For buildings developed in the future, we will study measures that contribute to maximizing energy conservation performance and make buildings emissions-free.
Improvement of energy consumption efficiency in existing buildings	We will make effectively timed investments that contribute to greater energy conservation and smarter building design and operation with an eye on the repair life cycle of existing buildings.
Upgrading of management through "BENI," an independently developed next-generation cloud-based BEMS platform	We are developing our own next-generation cloud-based building and energy management system (BEMS) that will contribute to improving the operational efficiency of the diverse parties involved in building operation, as well as visualizing and providing an overall picture for energy conservation activities.
Demand-side load management using demand response and power and heat storage, etc.	We will engage in energy demand-side load management using demand response, power and heat storage, and other methods to encourage more efficient energy use.





### (3) Linkage and Business Management Strategy

Participation in renewable energy business and contribution to regional revitalization	In addition to participating in renewable energy projects across Japan, we will contribute to regional revitalization and local community development that helps to promote industry and create jobs in varied regions.
Development of cocreation with energy businesses	We will develop relationships for cocreation that go beyond business transactions as an energy consumer with businesses in energy-related fields, including power generation, transmission and distribution, electricity retail, gas supply, and aggregator business.
Promotion of collaborative verification and R&D in the Marunouchi area	We will provide our assets in the area as demonstration fields for the implementation and verification of new technologies, thereby contributing to their establishment.



# Promoting Renewable Energy

## Promoting Use of Renewable Power in Buildings

In achieving its medium-to-long term targets (SBTs) for greenhouse gas emissions reductions and the target for the ratio of renewable power (RE100), the Mitsubishi Estate Group believes that it is imperative to switch the electricity used in the buildings it owns and operates to electricity derived from renewable energy. Based on this recognition, the Group is steadily implementing a switch to renewable power. In fiscal 2021, Mitsubishi Estate switched to renewable power for all the electricity used in 27 buildings, mainly in the Marunouchi area (the Otemachi, Marunouchi, and Yurakucho districts), including the electricity used by tenants. In fiscal 2022, renewable energy will be introduced in all the buildings<sup>\*1</sup> it owns and operates in the Tokyo metropolis and in Yokohama and all the office buildings<sup>\*2</sup> it owns in Hiroshima City. The company also plans to actively introduce renewable power in other areas.

The fiscal 2021 introductions increased the renewable energy rate to approximately 30% while the fiscal 2022 introductions are expected to increase the rate to around 50%.

In tandem with the revision of GHG reduction targets in line with the SBTi's new Net-Zero Standard in March 2022, the Group overall will aim to achieve RE100 by fiscal 2025.

\*1 Office buildings and commercial complexes in which the Mitsubishi Estate Group has at least a 50% equity interest, excluding the capital recycling business and properties scheduled for redevelopment, etc.

Introduction of further renewable power is planned in some of the office buildings and commercial complexes in which the Mitsubishi Estate Group has a less than 50% equity interest after discussions with joint venture partners and other interested parties.

\*2 The Mitsubishi Estate Group's equity interest in the Hiroshima Park Building, the Shin Hiroshima Building, and the NHK Hiroshima Broadcasting Center Building

See the following for the list of buildings that have introduced renewable energy.

List of Buildings Introducing Renewable Energy



## Promoting Use of Renewable Power in Logistics Facilities

Mitsubishi Estate is working to install solar panels on the roof space of the Logicross series of logistics facilities it develops where such installations are possible. At Logicross Ebina and Logicross Zama Komatsubara, completed in November 2020 and March 2022 respectively, the initiative uses the PPA<sup>\*</sup> model.

\* Power Purchase Agreement = a third-party ownership model for self-consumption solar power generation facilities



Logicross Zama Komatsubara, Completed March 2022



## Promoting Use of Renewable Energy at Premium Outlets®

Premium Outlets® nationwide operated by Mitsubishi Estate・Simon began using 100% renewable energy for electricity (“renewable power”) used in communal areas such as the dining areas of food courts and toilets in June 2022. The renewable power used is sourced by purchasing green energy certificates\*1. Ami Premium Outlets and Shisui Premium Outlets will also use power generated by carport-type solar power generators installed in 2016 and 2017 respectively.

In addition, Fukaya-Hanazono Premium Outlets (Fukaya, Saitama Prefecture), which opened on October 20, 2022, is the first Premium Outlets to operate on renewable power for all the electricity used in the facility, including tenant exclusive-use areas. The approximately 8,000MWh of electricity for the whole facility (estimated annual usage) is covered by solar panels installed on the site (estimated annual generation capacity approximately 150MWh) in addition to the use of green energy certificates.

In 2021, the annual consumption of purchased power in the communal areas of Premium Outlets nationwide was approximately 13,000MWh (actual figures of fiscal 2021; excludes solar power), which is equivalent to the consumption of approximately 3,000 regular households\*2, and the introduction of renewable power will reduce CO2 emissions by approximately 5,500 tons annually.

The Group aims to continue contributing to a sustainable society through the operation of Premium Outlets.

\*1 A system in which green power is treated as power with the “environmental added value” of reducing CO2 emissions with this value certified by a third party and traded in the form of certificates.

\*2 Calculated based on 4,258kWh per household/per year (from FY 2020 Statistical Survey on CO2 Emissions from the Household Sector (Preliminary Report) conducted by the Ministry of the Environment).



Carport-type solar power generator for captive consumption  
(Aimi Premium Outlets)



Carport-type solar power generator for captive consumption  
(Shisui Premium Outlets)



Installed solar panels  
(Fukaya-Hanazono Premium Outlets)



# Using Renewable Power in Condominiums

Mitsubishi Estate Residence has been promoting the use of renewable power in condominiums to achieve a 50% reduction in GHG emissions by 2030 compared with 2019, the target set in January 2022.

## Expanding Installation of Solar Panels on Condominiums

Mitsubishi Estate Residence has been working to utilize renewable energy by installing the soleco energy-creation system that combines high-voltage collective power systems with solar power systems in newly built condominiums with more than 40 residential units as a general rule since 2010. As of March 31, 2022, soleco had been installed in 229 condominium buildings. Mitsubishi Estate Residence will proceed with installation of solar panels on newly built condominiums for sale with less than 40 residential units where soleco has not been installed, while also introducing “soleco+<sup>\*1</sup>” for newly built condominiums for lease. In addition, approximately 250 t in CO<sub>2</sub> emissions reductions from electricity generated at 84 of the properties where soleco is already installed were qualified for J-Credits, which offset all of the electricity used in fiscal 2020 at the Mitsubishi Estate Residence head office and some of the communal areas in the same building. Since fiscal 2021, all the electricity used at Otemachi Financial City Grand Cube, which the head office occupies, has been switched to electricity sourced from renewable energy. Therefore, Mitsubishi Estate Residence is now using the J-Credits from soleco to offset electricity used in condominium sales centers<sup>\*2</sup>.

\*1 An electricity supply system that combines solar panels and non-fossil fuel energy certificates

\*2 Only projects in which Mitsubishi Estate Residence is the sales manager

## Switching All Electricity in Condominiums to Non-Fossil Fuel Energy Sources (Carbon Offsetting Using Electricity with Non-Fossil Fuel Energy Certificates)

In addition to expanding the installation of solar panels, Mitsubishi Estate Residence will switch to electricity with non-fossil fuel energy certificates for the high-voltage collective power purchased at The Parkhouse brand of condominiums and enable customers to contract for electricity with non-fossil fuel energy certificates at the time of delivery for The Parkhabio brand of condominiums for lease. By doing this, the company will realize the supply of electricity with non-fossil fuel energy certificates that does not emit CO<sub>2</sub> in all newly built condominiums for sale and lease by 2030. Approximately 60%<sup>\*</sup> of the energy that customers use at home is electricity, so switching to electricity free of fossil fuels can reduce CO<sub>2</sub> emissions in the daily lives of customers.

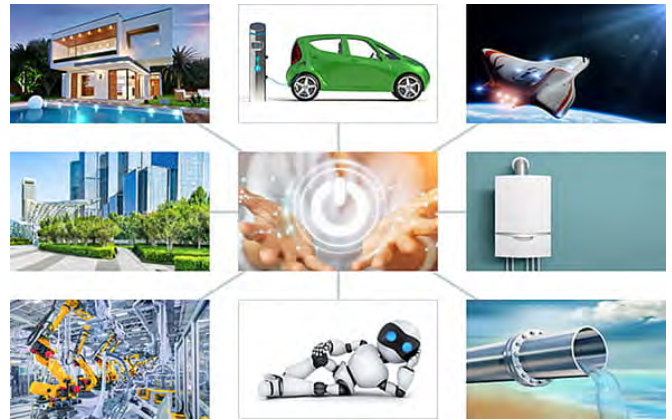
\* Based on research by Mitsubishi Estate Residence



# Investment in Venture Company Aimed at Commercialization of New Hydrogen Energy

Mitsubishi Estate has been promoting the development of low-carbon cities through the development and operation of buildings with high energy-saving performance and district heating and cooling projects. Moving forward, we believe that in order to achieve the CO2 emissions reduction targets for the entire Mitsubishi Estate Group and realize an even lower carbon society, it is necessary to expand the use of green energy that does not emit CO2 in addition to the energy-saving initiatives implemented so far.

Therefore, in January 2019, Mitsubishi Estate invested in Clean Planet Inc., a venture company involved in pioneering innovation in the energy sector. Clean Planet has developed a new hydrogen energy technology, in which the energy output per unit of hydrogen is far greater than conventional hydrogen energy. Mitsubishi Estate and Clean Planet will work together to commercialize new hydrogen energy with a goal of reducing the cost of electricity to one tenth of the current level. We will contribute to creating the foundation for the sustainable decarbonized society set out in the Paris Accord by expanding the use of this clean new hydrogen energy worldwide.



Contributing to environment- and people-friendly urban development through high-efficiency clean energy



# Working Together with Tenants

## Organizing Global Warming Prevention Council Meetings

Mitsubishi Estate has been organizing yearly Global Warming Prevention Council meetings since 2008, collaborating with the tenants in its buildings. The Council meetings are convened for an explanation of CO2 emission reduction and energy-saving initiatives, based on the Tokyo Metropolitan Environmental Security Ordinance and the Energy Saving Act, and to provide updates on their progress. Mitsubishi Estate will continue this initiative to provide tenants with information on energy-saving activities underway in the building, their concrete reduction targets, and energy-saving methods that can thereby promote energy-saving activities together with its tenants.

## Publication of the Sustainability Guide

Since fiscal 2019, Mitsubishi Estate and Japan Real Estate Asset Management have jointly published the Sustainability Guide, which is distributed to office tenants with support from Mitsubishi Jisho Property Management.

In order to realize the sustainable urban development and contribution to the SDGs set out by the Mitsubishi Estate Group, it is necessary to collaborate with all stakeholders involved in urban development and build cooperative relationships. The guide will primarily be utilized as a communication tool for promoting collaboration with office tenants to help facilitate a sustainable world.

### ● Main Topics

- Sustainability Guide Vol.1 (published 2019) : New office spaces and workstyle reform
- Sustainability Guide Vol.2 (published 2021) : What an office should be like in the "new normal" era ・ Recycling waste

Sustainability Guide Vol.1 (published 2019) (PDF 958KB)

[PDF](#)

Sustainability Guide Vol.2 (published 2021) (PDF 1.34MB)

[PDF](#)



## Green Lease Program Benefits Both Owners and Tenants

Japan Real Estate Asset Management (JRE-AM), which provides asset management services for Japan Real Estate Investment (JRE), has been actively promoting renovations of equipment in building stock aimed at reducing environmental impact. Its aim is to build a portfolio that is highly rated by tenants and investors that prioritize environmental performance of buildings.

In general, building owners are reluctant to introduce environmental equipment renovations because they do not necessarily produce economic benefits commensurate with the investment. In these circumstances, JRE-AM has introduced a Green Lease Program under which a portion of the reduction in energy usage fees received by tenants is returned to building owners for a certain period. Taking advantage of the program, the company has been progressively converting lighting in tenant use areas to LED. This also has the advantage of dramatically reducing electricity fees for tenants, creating a "win-win" benefit for both tenants and building owners.

By expanding the Green Lease Program, JRE-AM will continue to provide value-added, environmentally-friendly real estate that contributes to CO2 reduction.

## Establishing New Green Lease Clause

In order to promote energy conservation in collaboration with tenants, Mitsubishi Estate has established a new green lease clause in its lease agreement template.

See the following for the percentages of agreements based on the green lease clause.

ESG Data > E: Environmental data > (2) Other





# Promoting Energy-Saving Measures

## Promoting the Use of Carbon Neutral City Gas

Marunouchi Heat Supply Co., Ltd. began using carbon neutral city gas in March 2020 at the Marunouchi Building and the Otemachi Park Building, the first-ever use of carbon neutral gas by office buildings in Japan. The carbon neutral city gas derives from carbon neutral LNG purchased by Tokyo Gas from Shell Group with Shell Group's carbon credits used to offset the CO<sub>2</sub> emissions generated in all processes from exploration to use as fuel.

The carbon neutral city gas is being used in the hybrid power generation system installed in the Marunouchi Building in March 2019 and the gas co-generation system in the district heating and cooling plant in the Otemachi Park Building. As a result, significant reductions in CO<sub>2</sub> emissions have been achieved.

Furthermore, beginning November 2021, Marunouchi Heat Supply switched the city gas it employs at all district heating and cooling plants it operates to carbon neutral city gas. This means that now approximately 3.4 million m<sup>3</sup> of carbon neutral city gas is supplied annually, achieving the country's highest reduction of CO<sub>2</sub> emissions at 97,000 t<sup>\*1</sup> per year, equivalent to the amount of city gas used in nearly 90,000 average households. In switching over fully to carbon neutral city gas, the company's global and environmentally minded initiatives and a strong heat network has resulted in a local heat supply business contributing to better resilience and achieving a sustainable society.

Also, with the goal of popularizing carbon neutral LNG and improving its utility value, Tokyo Gas, which procures and supplies carbon neutral LNG, along with four organizations that purchase the gas, established the Carbon Neutral LNG Buyers' Alliance in March 2021 (with 44 member companies as of end of August 2022).

\*1 The CO<sub>2</sub> emission factor used in calculations is the value that offsets the greenhouse effect gas occurring from the process covering natural gas extraction to burning.



Underground heat supply piping





## Development of Mitsubishi Estate's First Logistics Facility to Meet ZEB Standards

Logicross Zama Komatsubara, a logistics facility completed in March 2022, became Mitsubishi Estate's first facility to receive Zero Energy Building (ZEB)<sup>\*1</sup> certification under the Building-housing Energy-efficiency Labeling System (BELS)<sup>\*2</sup>. Also, we have installed solar power generation equipment on the facility's rooftop and are running a range of initiatives, such as utilizing a power purchase agreement (PPA)<sup>\*3</sup> model in-house consumption scheme using the power generated at the facility.

Going forward, Mitsubishi Estate plans to obtain BELS certification as a general principle for all logistics facilities built after Logicross Ebina, completed in November 2020.

\*1 Buildings with annual primary energy consumption of net zero or less.

\*2 A third-party certification system for evaluating and labeling energy efficiency based on the Ministry of Land, Infrastructure, Transport and Tourism's Evaluation Guidelines for Labeling Energy Efficiency Performance For Non-Residential Buildings.

\*3 The second initiative for the Logicross series of facilities carried out together with SymEnergy Inc., a PPA operator.



Logicross Zama Komatsubara

## Taking Measures for a Net Zero Energy Building (ZEB) at Miyako Shimojishima Airport Terminal in Okinawa

Opened in March 2019, the Miyako Shimojishima Airport terminal is Japan's first-ever airport terminal that has earned a Net Zero Energy Building (ZEB) rating. The Group has incorporated a range of sustainable, energy-saving measures. It was designed based on a plan that will make primary energy consumption around 68% less than a comparable structure built to the national standard, and for which the project was accredited with the ZEB Ready rating by the Agency for Natural Resources and Energy of Japan's Ministry of Economy, Trade and Industry. It has also earned the highest ranking of the Building-housing Energy-efficiency Labeling System (BELS), and is the first airport terminal in Japan to actively adopt CLT<sup>\*</sup> as a structural material for its roof.



Projects Utilizing CLT





# Delivering the Industry's First ZEH Condominiums Generating Virtually Zero CO<sub>2</sub> Emissions from Electricity Consumption

With The Parkhabio Bunkyo Edogawabashi condominiums for lease Mitsubishi Estate Residence has delivered the industry's first ZEH (net zero energy house) condominiums generating virtually zero CO<sub>2</sub> emissions from electricity consumption. This property is the first in The Parkhabio brand of condominiums for lease to adopt the ZEH-M Oriented standards, recommended for high-rise housing with six or more floors.

Improving heat insulation and reducing consumption of primary energy, in addition to installing solar panels and utilizing non-fossil certificates\* from renewable energy sources, enable the building to be powered by renewable energy, with the building as a whole generating virtually zero CO<sub>2</sub> emissions through electricity consumption. These efforts have reduced the building's total annual CO<sub>2</sub> emissions by 63% compared with previous levels (source: Mitsubishi Estate Residence Co., Ltd.). In principle, moving forward we plan to introduce the "soleco+" electricity supply system—which combines solar power generation and non-fossil certificates—as standard for The Parkhabio series.

In addition, Mitsubishi Estate Residence aims to make ZEH-M Oriented features (reduction of 20% or more in annual primary energy consumption) a minimum standard in all newly-built condominiums offered for sale of lease by fiscal 2025. This initiative will make it possible for customers to reduce energy use, making a significant contribution to reducing CO<sub>2</sub> emissions.

\*1 The non-fossil fuel value of electricity generated from non-fossil fuel sources, such as solar or wind power, is isolated and presented in the form of certificates which can be traded.

\*2 Excludes some properties such as those which are joint ventures.



The Parkhabio Bunkyo Edogawabashi (artist's rendering)

## Combining Energy Saving and Energy Creation to Enable Sustainable Living The First ZEH-M Ready Feature for The Parkhouse Brand

As part of the Mitsubishi Estate Group initiative for sustainable urban development that proactively addresses climate change and environmental issues, Mitsubishi Estate Residence and Kintetsu Real Estate Co., Ltd. are adopting the ZEH-M Ready feature at The Parkhouse Shin-Urayasu Marine Villa residences which were offered for sale in late November 2020. This is the first condominium complex meeting ZEH-M Ready standards to be offered by The Parkhouse, the condominium series sold by Mitsubishi Estate Residence.

Net zero energy housing (ZEH) is a type of residence that aims to offset its annual primary energy<sup>\*1</sup> expenditure and graded standards have been set for reduction of primary energy consumption. The property has been evaluated by a third-party as reducing primary energy consumption by 50% by enhancing the energy saving performance of the building and employing energy-creating equipment such as solar power generation, etc., to generate its own electricity.

This property meets the ZEH-M Ready standard thanks to "Solei-Yu," a new energy management system developed in collaboration with Mitsubishi Estate Residence, Kintetsu Real Estate, Mitsubishi Electric Corporation, and the Kansai Electric Power Group (Next Power Company). The system combines (1) thermal insulation performance that meets the ZEH standard, (2) heat pump-type water heater group control system for effective use of solar power generation inside the building, (3) and a power supply framework that efficiently distributes solar power to each unit via a building-wide shared solar power generation and supply network. All of this reduces annual utility costs by approximately 38%<sup>\*2</sup> in each unit and savings of approximately 100,000 yen annually per unit.

This new style of environmentally-conscious condominium that combines energy saving and energy creation delivers environmentally-friendly, comfortable, and sustainable living.

\*1 Primary energy refers to petroleum, natural gas, sunlight, and other naturally-derived energy sources. Primary energy consumption is calculated based on heating and cooling, ventilation, lighting, hot water supply, and five other categories.

\*2 According to Next Power Company research.



The Parkhouse Shin-Urayasu Marine Villa



Solei-Yu

## Reducing CO2 Emissions during Condominium Construction

As part of its efforts to reduce CO2 emissions during construction, Mitsubishi Estate Residence will gradually transition to using concrete mixed with blast furnace cement, which emits fewer CO2 emissions, as a general rule for on-site piling in all new condominiums for sale or rent that it develops. The company has already introduced such concrete at 10 properties (as of August 2022), including Atsugi First Avenue, Chuo Nihonbashi Hisamatsucho, and The Parkhabio Bunkyo Edogawabashi.



# Including CO2 Emissions in Condominium Household Account Books to Raise Environmental Awareness

Since 2013, Condominium Household Account Books have been distributed to those considering buying a unit in The Parkhouse, a condominium sold by Mitsubishi Estate Residence, with the objective of communicating the environmental performance of the brand and stimulating energy-saving behavior. This account book presents approximation of utilities and other running costs to be incurred after moving into the condominium and communicates energy conservation performance in an easy-to-understand monetary value, thereby helping potential customers make more informed purchasing decisions.

Since October 2021, with the cooperation of MEC eco LIFE, Mitsubishi Estate Residence has been disclosing the CO2 emissions of each unit, which is expected to encourage residents to reduce emissions in their daily lives. In 2022, Mitsubishi Estate Residence began providing Condominium Household Account Books for renovated condominiums in its business buying back and reselling individual units. In recognition of its Condominium Household Account Books, Mitsubishi Estate Residence was selected in 2020 as a participating company in the “CO2 reduction action (zero emissions) movement—a sustainable society created by consumers and businesses,” an initiative of the Tokyo Metropolitan Government. Mitsubishi Estate Residence will continue to introduce the ZEH-M standard, renewable energy, and take other initiatives to achieve a 50% reduction in GHG emissions by 2030 compared with 2019, the target set in January 2022.



Condominium Household Account Book (Japanese Only)



## Using ENE-FARM as a Standard Feature in All The Parkhouse Stage Detached Houses (Excludes joint venture projects)

Mitsubishi Estate Residence's The Parkhouse Stage series of detached houses have used ENE-FARM residential fuel cells as a standard feature in all homes in the area supplied by Tokyo Gas or Keiyo Gas from the design stage which began in November 2017. ENE-FARM is a distributed energy system that is gentle on the global environment because it saves energy, cuts down on CO2 emissions and limits maximum power consumption.

ENE-FARM produces electricity by causing hydrogen taken from municipal gas supplies to react with oxygen in the air. The electrical power generated is used by households and the heat generated in the process is used to supply hot water. Since the electricity is used in the same place where it is produced, there are no supply losses. The heat generated while making the energy is also used without any waste, so it is a highly environmentally-friendly system.

ENE-FARM is equipped with a continued power generating function that operates even during power outages.\*1 In the unlikely event of a power outage, it provides electrical energy to power lights and communication devices through a custom outlet. Hot water and heating connected to ENE-FARM can be used as well. Furthermore, when there is a water outage or a disaster, water can be drawn from the hot water tank and used for non-drinking purposes.

To create homes that are kind to the global environment, the company will continue to actively encourage the adoption of environmentally-friendly home equipment and devices in the future as well.

\*1 For ENE-FARM to produce energy during a power outage, ENE-FARM must already be producing electricity when the power outage occurs and the municipal gas and water utilities must still be supplied.



Exterior of The Parkhouse Stage Higashitotsuka, where ENE-FARM was first introduced



# Combining Aerotech with Solar Power Generation to Meet Net Zero-Energy House (ZEH) Standards

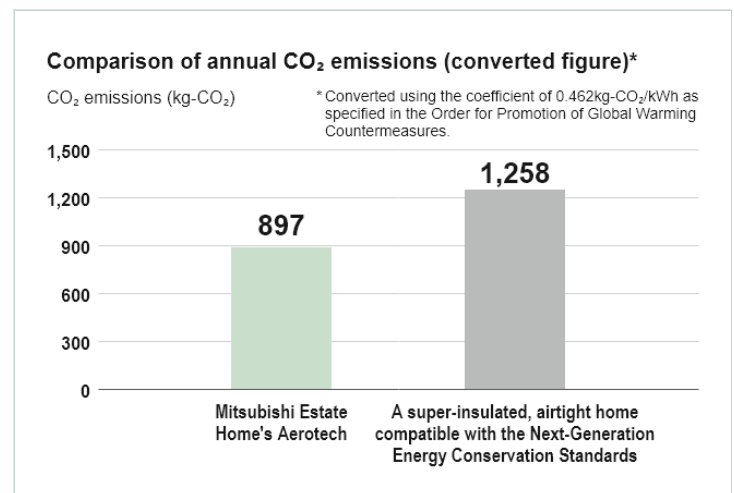
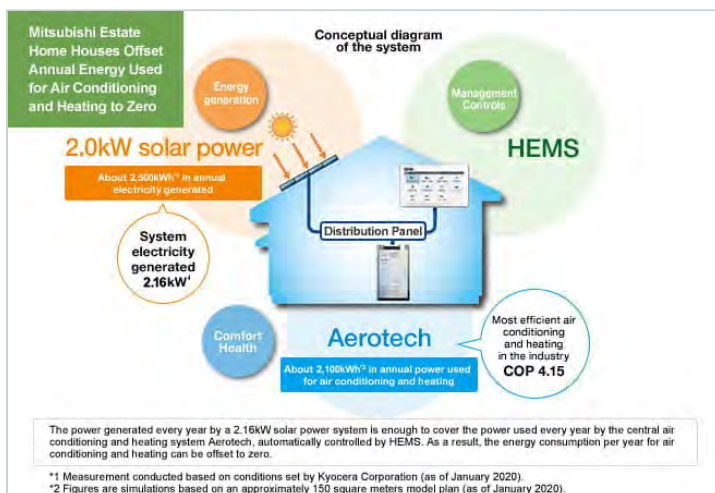
Aerotech is a central air conditioning system that Mitsubishi Estate Home offers in its custom-built homes. It provides heating, cooling, and ventilation for the entire home using a single compact indoor unit. The Aerotech system delivers the industry's top-class heating and cooling efficiency that helps lower power consumption while allowing residents to set room temperatures individually across the entire residence, including the bath and toilet. It also contributes to preventing heatstroke and heat shock by minimizing temperature differences across the home. Since its debut in 1995, the system has been installed in more than 90% of the company's custom-built detached homes, and is in use in more than 10,000 houses. Building on a track record of 25 years since its release, the company is continuing to evolve as an entire-home air conditioning system pioneer.

Starting October 2019, Mitsubishi Estate Home, in collaboration with a service provider, began offering Zuttomo Solar for Aerotech, a service that provides free installation of solar power generation equipment for customers who purchase a detached custom-built home. By combining solar power generation with features such as Aerotech and the Home Energy Management System (HEMS), CO<sub>2</sub> emissions can be reduced by nearly 900 kg per year compared with homes heated and cooled using individual heat pump air conditioners. Furthermore, the annual power capacity delivered by the solar power generation system (approximately 2,750 kWh equivalent<sup>\*1</sup>) significantly exceeds annual heating and cooling energy expenditures (approximately 2,100 kWh equivalent<sup>\*1</sup>).

Mitsubishi Estate Home established the CO<sub>2</sub> Emissions Reduction Strategy and aims to reduce CO<sub>2</sub> emissions by 60% (compared with fiscal 2019) by fiscal 2030 and to achieve net zero by fiscal 2050. Utilizing its Aerotech and Zuttomo Solar for Aerotech services, the company will continue promoting the Net Zero Energy House (ZEH) and the Nearly-ZEH<sup>\*2</sup> initiatives (target ZEH percentage by fiscal 2030: 85%) by upgrading the insulation performance of properties, using highly efficient equipment, and making innovations in design techniques. This will provide customers with an energy efficient, comfortable home environment while contributing to the reduction of CO<sub>2</sub> emissions.

\*1 Figures are simulations by Mitsubishi Estate Home assuming an approximately 150 square meters model plan (as of January 2020).

\*2 Advanced housing that looks ahead to ZEH. It features a highly insulated exterior shell and highly efficient, energy saving equipment with annual primary energy consumption close to zero through use of renewable energy, etc.





# Initiatives proposed by the Architectural Design and Engineering Group; Environmental Architecture of Sharing Wellness and Happiness / Net Zero Energy Building (ZEB)

Mitsubishi Jisho Sekkei has defined "Environmental architecture" as architecture that allows residents and users to share wellness and happiness to offer high added value architectural design. It aims to be environmentally conscious, provide comfort, promote wellness, and deliver personal design for higher productivity. This new concept delivers the design of comprehensive environmental where interactions among people create new and diverse values.

## Environmental Architecture of Sharing Wellness and Happiness



歓 共 健 築

KANKYO KENCHIKU

第6068002号(標準文字)、区分(第37類・第42類)



Wellness

- ▶ **Comfort** Energy saving and improving productivity
- ▶ **Wellness** Reducing absenteeism<sup>\*1</sup> and presenteeism<sup>\*2</sup>
- ▶ **Diversity** Improving productivity through personal design

\*1 Absenteeism: Being absent from work due to sickness

\*2 Presenteeism: Physical or mental health issues reducing work productivity while at work



## ZEB Initiatives—Achieving both Net Zero Energy Building and Comfort

In addition to improving "energy efficiency" toward ZEB, we are introducing a variety of environmentally friendly technologies in large-scale buildings with the aim of creating a highly comfortable working environment that provides diverse work styles and worker preferences. These technologies have been introduced through the development of new systems, the experimental stage, and the demonstration stage in small and medium-sized buildings, and we are working on the design of tenant office buildings with next-generation energy efficiency and comfort based on simulations and actual measurements.







# CO<sub>2</sub> Emissions Reduction Initiatives by Japan Real Estate Investment Corporation

In anticipation of the early achievement of the CO<sub>2</sub> emissions reduction target it unveiled in 2019, Japan Real Estate Investment Corporation (JRE) is seeking to reduce its CO<sub>2</sub> emissions by 80% by FY2030 compared with FY2019 and to achieve virtually zero emissions by FY2050 as new targets raising the rate of its CO<sub>2</sub> emissions reductions. The new targets have been certified by the Science Based Targets (SBT) initiative.<sup>\*1</sup> In conjunction with its application to the SBT initiative, JRE has made several changes to align with global standards, such as switching to a total emissions reduction target from its previous per-unit target, revising the base year from FY2013 to FY2019, and managing emissions reduction targets for Scope 1, Scope 2, and Scope 3.<sup>\*2</sup> In addition, JRE joined RE100, an international initiative encouraging companies to source 100% of the electricity they use in their business activities from renewable energy. Moreover, JRE will work to realize a decarbonized society by sourcing 90% of the electricity it uses at buildings under its ownership from renewable energy by FY2030 and 100% by FY2050.

\*1 An international initiative aiming to limit the average global temperature rise resulting from climate change to below 2 °C above pre-industrial levels

\*2 Scope breakdown: Scope 1: Emissions caused directly by combustion of fuel (gas, fuel oil); Scope 2: Emissions caused indirectly by combustion derived from the use of electricity and local heating and cooling; and Scope 3: Emissions caused indirectly by combustion resulting from the use of fuel and electricity in relation to tenant areas, etc.

## Acquisition of ZEB Certification

Mitsubishi Jisho Design was commissioned by the Japan Real Estate Investment Corporation (JRE) to examine the possibility of reducing CO<sub>2</sub> emissions for its entire portfolio and to identify properties that could be converted to Net Zero Energy Buildings (ZEB)<sup>\*1</sup> while carrying out concrete examinations aimed at converting such properties to net-zero-energy buildings. Specifically, Mitsubishi Jisho Sekkei proposed methods for reducing CO<sub>2</sub> emissions after analyzing building age, building envelope performance, building scale, and air conditioning and lighting systems. Based on the analysis results, JRE set a target of converting between five and ten of its properties to net-zero-energy buildings by 2030. As a step toward achieving this target, JRE acquired ZEB Ready<sup>\*2</sup> certification at the design stage and a five-star rating under the Building-housing Energy-efficiency Labelling System (BELS) for its JRE Higashi-Gotanda 1-Chome and Daido Seimei Niigata Buildings.

\*1 Buildings with annual primary energy consumption of net zero or less

\*2 As advanced buildings in anticipation of ZEB certification, buildings awarded ZEB Ready certification are those with primary energy consumption that has been reduced more than 50% compared with standard primary energy consumption, excluding renewable energy.



JRE Higashi-Gotanda 1-Chome Building



Daido Seimei Niigata Building



## Publishing the Tokyo Metropolitan Environmental Security Ordinance Report on Measures against Global Warming

Please click below to view Mitsubishi Estate's Report on Measures against Global Warming.

Mitsubishi Estate Report on Measures  
against Global Warming (Japanese only)  
(PDF 2.7MB)



The Environmental Bureau of the Tokyo  
Metropolitan Government Public Report  
Data (Japanese only)



## Publication of Minato-ku Global Warming Countermeasures Report in Accordance with the Minato-ku Global Warming Countermeasures Reporting Program

See the following for Mitsubishi Estate's Minato-ku Global Warming Countermeasures Report.

Fiscal 2021 Minato-ku Global Warming  
Countermeasures Report (Fiscal 2020  
Results) (Japanese only) (PDF 4.7MB)



Excerpt from Fiscal 2021 List of Registered  
Business Sites published by Minato-ku  
(Fiscal 2020 Results) (Japanese only) (PDF  
225KB)





## Environment

# List of Buildings Introducing Renewable Energy

In achieving its medium-to-long term targets (SBTs) for greenhouse gas emissions reductions and the target for the ratio of renewable power (RE100), the Mitsubishi Estate Group believes that it is imperative to switch the electricity used in the buildings it owns and operates to electricity derived from renewable energy ("renewable power"). Based on this recognition, the Group is steadily implementing a switch to renewable power in line with the RE100 commitment.

See the following for the list of buildings introducing renewable energy. (Buildings that have not commenced the switch to renewable electricity are excluded even where an agreement to switch has been concluded.) (As of October 20, 2022)

- \* Buildings and commercial facilities in which Mitsubishi Estate's ownership is 50% or more. capital-recycling business and projects scheduled for redevelopment are excluded. For buildings and commercial facilities in which Mitsubishi Estate's ownership is less than 50%, upon consultation with business partners and other parties, electricity from renewable energy was introduced at some projects.

## Around Tokyo Station (Otemachi / Marunouchi / Yurakucho)



### Marunouchi Building

Year of introduction: FY2021

Acquisition of DBJ Green Building Certification

For additional details of this property [📄](#)



### Shin-Marunouchi Building

Year of introduction: FY2021

For additional details of this property [📄](#)



### Mitsubishi Building

Year of introduction: FY2021

For additional details of this property [📄](#)



### Marunouchi 2-chome Building

Year of introduction: FY2021

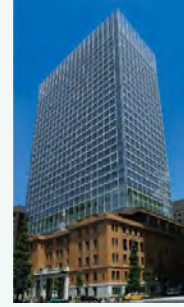
For additional details of this  
property



### Marunouchi-Nakadori Building

Year of introduction: FY2021

For additional details of this  
property



### The Industry Club of Japan, Mitsubishi UFJ Trust And Banking Building

Year of introduction: FY2021

Acquisition of DBJ Green Building  
Certification

For additional details of this  
property



### Marunouchi Eiraku Building

Year of introduction: FY2021

For additional details of this  
property



### Marunouchi Oazo A District(Nihon Seimei Marunouchi Building, Marunouchi Kitaguchi Building, Marunouchi Hotel, Oazo (Shop&Restaurant))

Year of introduction: FY2021

Acquisition of DBJ Green Building  
Certification

\*Marunouchi Kitaguchi Building

For additional details of this  
property



### Tokyo Building

Year of introduction: FY2021

For additional details of this  
property



### Marunouchi Park Building

Year of introduction: FY2021

Acquisition of DBJ Green Building Certification

For additional details of this property [📄](#)



### Shin-Tokyo Building

Year of introduction: FY2021

For additional details of this property [📄](#)



### Shin-Kokusai Building

Year of introduction: FY2021

For additional details of this property [📄](#)



### Kokusai Building

Year of introduction: FY2021

For additional details of this property [📄](#)



### Marunouchi Nijubashi Building

Year of introduction: FY2021

For additional details of this property [📄](#)



### Otemachi Building

Year of introduction: FY2021

For additional details of this property [📄](#)



### Otemachi Financial City Grand Cube

Year of introduction: FY2021

For additional details of this property [📄](#)



### Otemon Tower-ENEOS Building

Year of introduction: FY2021

Acquisition of DBJ Green Building Certification

For additional details of this property [📄](#)



### OTEMACHI PARK BUILDING

Year of introduction: FY2021

Acquisition of DBJ Green Building Certification

For additional details of this property [📄](#)



### **TOKYO TORCH Tokiwabashi Tower**

Year of introduction: FY2021

Acquisition of DBJ Green Building  
Certification

**For additional details of this  
property**



### **Otemachi Financial City North Tower**

Year of introduction: FY2021

**For additional details of this  
property**



### **Otemachi Financial City South Tower**

Year of introduction: FY2021

**For additional details of this  
property**



### **Hibiya Kokusai Building**

Year of introduction: FY2021

**For additional details of this  
property**



### **Shin-Otemachi Building**

Year of introduction: FY2022

**For additional details of this  
property**



### **Shin-Nisseki Building**

Year of introduction: FY2022

**For additional details of this  
property**



## Other areas in Tokyo



### Mitsubishi Chemical Nihonbashi Building

Year of introduction: FY2021

For additional details of this  
property [📄](#)



### Shinjuku Eastside Square

Year of introduction: FY2021

Acquisition of DBJ Green Building  
Certification

For additional details of this  
property [📄](#)



### Shinjuku Front Tower

Year of introduction: FY2021

Acquisition of DBJ Green Building  
Certification

For additional details of this  
property [📄](#)



### Shin-Aoyama Building

Year of introduction: FY2022

For additional details of this  
property [📄](#)



### Akasaka Park Building

Year of introduction: FY2022

For additional details of this  
property [📄](#)



### Sanno Park Tower

Year of introduction: FY2022

For additional details of this  
property [📄](#)



### Sanno Grand Building

Year of introduction: FY2022

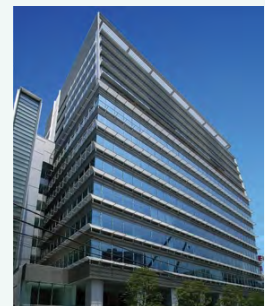
For additional details of this  
property [📄](#)



### Kandabashi Park Building

Year of introduction: FY2022

For additional details of this  
property [📄](#)



### Nibancho Garden

Year of introduction: FY2022

For additional details of this  
property [📄](#)





### Shibuya Cross Tower

Year of introduction: FY2022

For additional details of this property [📄](#)



### Linksquare Shinjuku

Year of introduction: FY2022

Acquisition of DBJ Green Building Certification

For additional details of this property [📄](#)



### Mita Kokusai Building

Year of introduction: FY2022

For additional details of this property [📄](#)



### Toyosu Foresia

Year of introduction: FY2022

Acquisition of DBJ Green Building Certification

\* Owned via a TMK (tokutei mokuteki kaisha ; a form of special purpose vehicle [SPV] in Japan)

For additional details of this property [📄](#)



### Toyosu Front

Year of introduction: FY2022

Acquisition of DBJ Green Building Certification

For additional details of this property [📄](#)



### Mizuho Lease Building

Year of introduction: FY2022

For additional details of this property [📄](#)



### AquaCity Odaiba

Year of introduction: FY2022

For additional details of this property [📄](#)



### SUNAMO Minamisago Shopping Center

Year of introduction: FY2022

For additional details of this property [📄](#)



### Ponte Porta Senju

Year of introduction: FY2022

Acquisition of DBJ Green Building Certification

For additional details of this property [📄](#)



### Higashikurume Shopping Center Qurune

Year of introduction: FY2022

For additional details of this property [📄](#)



### M's CROSS Omotesando

Year of introduction: FY2022



## Yokohama



### The Landmark Tower Yokohama

Year of introduction: FY2021

For additional details of this  
property [📄](#)



### MARK IS Minatomirai

Year of introduction: FY2021

Acquisition of DBJ Green Building  
Certification

For additional details of this  
property [📄](#)

## Chubu Area



### Dai Nagoya Building

Year of introduction: FY2021

Acquisition of DBJ Green Building  
Certification

For additional details of this  
property [📄](#)



# Osaka



## Grand Front Osaka (South building, North building, Umekita Square)

Year of introduction: FY2022

For additional details of this  
property [📄](#)

# Hiroshima



## Hiroshima Park Building

Year of introduction: FY2022

For additional details of this  
property [📄](#)



## Shin Hiroshima Building

Year of introduction: FY2022

Acquisition of DBJ Green Building  
Certification

For additional details of this  
property [📄](#)



## NHK Hiroshima Broadcasting Center Building

Year of introduction: FY2022

For additional details of this  
property [📄](#)

Please see the following page for more details about the Mitsubishi Estate Group's acquisition of environmental real estate certifications, including the Development Bank of Japan (DBJ) Green Building certification and the Comprehensive Assessment System for Built Environment Efficiency (CASBEE) certification.

Promoting Acquisition of Environmental Real Estate Certifications





## Environment

# Reducing Waste and Preventing Pollution

## Policy on Waste Reduction, Preventing Pollution, and Reducing Use of Resources

The Mitsubishi Estate Group has set a policy creating a sound material-cycle society in the Mitsubishi Estate Group Basic Environmental Policy and strives to reduce, reuse, and recycle at each stage of business, including planning, development, design, construction, management, and dismantlement. The Group also works to reduce waste, pollution, and use of resources by increasing the lifespan of buildings, including the use of existing buildings through renovation.

Moreover, in the area of Environment, one of the Key Themes stated in the Mitsubishi Estate Group 2030 Goals for SDGs, the Group has set goals for increasing waste recycling rates and reducing emissions, mainly for food and plastic in the management and operation of its properties, and is working in collaboration with tenants and other stakeholders to achieve a material-cycle society.

## Goals and Achievement Status

In waste reduction, preventing pollution, and reducing use of resources, the Group has set goals for 2030 in the area of Environment, one of the Key Themes set out in the Mitsubishi Estate Group 2030 Goals for SDGs. In concrete terms it has set targets for improving the waste recycling rate to 90% by 2030 and reducing waste emissions by 20% per m<sup>2</sup> compared to fiscal 2019. The Group is implementing initiatives utilizing Plan Do Check Act (PDCA) with the aim of achieving these goals.

The Group is working to create a sound material-cycle society by taking action in collaboration with diverse stakeholders, including both tenant companies and suppliers, as well as urban residents, building visitors and other stakeholders.

See the following for the data on reduction of waste.

[ESG Data > E: Environmental data > \(1\) KPI](#)





# Reducing Waste

## Initiatives in Cooperation with Stakeholders

See the following for information on initiatives at Mitsubishi Estate Headquarters and initiatives in cooperation with stakeholders.

Mitsubishi Estate Group 2030 Goals for SDGs > Key Theme 1: Environment > Reducing Waste and Increasing Recycling Rate

### Recycling Lunch Box Containers as a Community with the Marunouchi Eco-Bento Project

In May 2016, Mitsubishi Estate launched the Marunouchi Eco-Bento Project to promote bento ("lunch box") container recycling involving the entire community, which is the first initiative of its kind in Japan.

The project introduced a special P&P Re-repack recyclable containers coated with plastic film for bento sold in the Marunouchi area. After finishing the bento, only the lid and removed film are discarded, while the container is returned to a collection box located in each building for recycling. Mitsubishi Estate coordinates with multiple shops in the planning and operation of the project as a property developer.

During the verification test conducted with 16 participating shops in 3 buildings over a two-month period starting in October 2015, 20.8% of containers were collected, reducing nearly 665 kg of CO<sub>2</sub> (equivalent to the amount absorbed by 48 cedar trees in one year). Participating shops mentioned that it was an easy way to contribute to society, resulting in more participating stores across a wider area as we launch the full-scale project. Currently, 12 shops in 15 buildings participate. There are plans to reach out to more shops in the future and install additional collection points in order to further reduce the impact on the environment.

Marunouchi Eco-Bento Project (Japanese only)





## Sanchi-Chokuso Ainoribin—A New Way to Deliver Regional Specialties by Consolidating Freight and Passengers

The dwindling population in recent years has caused a labor shortage in the vehicle transportation industry, resulting in increasing transportation costs. With this in mind, Mitsubishi Estate started the new Sanchi-Chokuso Ainoribin distribution service in August 2018 to enhance agricultural product distribution and deliver regional specialties to Tokyo on a regular basis.

This project is operated in cooperation with JA-Zenchu (Central Union of Agricultural Co-operatives), the Norinchukin Bank, the Association for Creating Sustainability in Urban Development of the Otemachi, Marunouchi, and Yurakucho Districts ("Ecozzeria Association"), and Up Quality Inc. In cooperation with bus companies from across the country, regional specialties are loaded into the trunk space of express passenger buses and delivered to Marunouchi. These products are sold to workers and visitors at Bus Ainori Marché, farmers market style outlets set up in the Marunouchi area, as well as to restaurants and department stores.



This service makes it possible to offer specialty vegetables and other rare items that producers are generally unable to ship out of local areas due to minimal production, resulting not only in increased income among producers and a revitalizing of the community, but also offering the chance for consumers in the city to conveniently purchase fresh, high-quality produce. Because this initiative helps tackle many problems at once, such as reducing local food loss in the production area, increasing income for transportation companies, and reducing CO<sub>2</sub>, we are considering ramping up such efforts in the future.

## Initiatives to Reduce Waste in the Detached Housing Business

In June 2022, Mitsubishi Estate Home established the CO<sub>2</sub> Emissions Reduction Strategy to accelerate the realization of a decarbonized society. Having established the selection of construction methods that reduce waste and materials that are easy to recycle as one of its strategies, the company will continue to promote further initiatives in this area.

Specifically, the company will aim to reduce onsite waste by promoting pre-cutting of structural, insulation, and construction materials (interior and exterior) during construction, optimization of order volumes, and improvement of construction methods. In addition to the measures taken during construction, the company also aims to reduce the frequency of repairs through the use of more durable exterior and other materials leading to a reduction in waste from repairs and demolition.



## Sustainable Refurbishment of Guest Rooms at The Royal Park Hotel Fukuoka

Royal Park Hotels and Resorts refurbished guest rooms at The Royal Park Hotel Fukuoka in Hakata, Fukuoka City based on the themes of sustainability, functionality, and of local attractions in Fukuoka.

The refurbishments included some of the guest rooms and corridors on floors 2 through 8. Furniture that could still be used, including chairs and sofas, was repaired and reused in pursuit of sustainability. Functionality was also enhanced, including the ability to check on crowding in restaurants and usage of laundry rooms in the hotel via television. In addition, there was a commitment to designing the entire hotel to give a sense of local Fukuoka, including the installation of carpets inspired by local handicrafts such as Okawa joinery, Hakata walls, and Hakata spinning tops.



A refurbished standard floor guest room

The 18 Royal Park Hotels all over Japan have already been working to reduce plastic usage and promote recycling with measures that include a gradual switch to biomass products for guest room amenities and the use of 100% recycled plastic bottles for mineral water. This refurbishment of guest rooms will inspire efforts to further reduce environmental impact.



# Initiatives for Effective Use of Building Stock

## Effectively Using Building Stock with Building Renovation Business

Since May 2014, Mitsubishi Estate Residence has been involved in the Building Renovation Business (renovation and rental business using building stock), where small- and medium-sized buildings are renovated for earthquake resistance and to meet needs and then leased as rental properties such as offices and residences, including shared residences.

In June 2021, renovations on The ParkRex OHORIKOEN, a project which was the first lodging facility conversion, were completed in the Otemon neighborhood of Chuo-ku, Fukuoka, with FIKA Co., Ltd. unveiling its first hostel in the Western Japan area at the grand opening of UNPLAN Fukuoka.

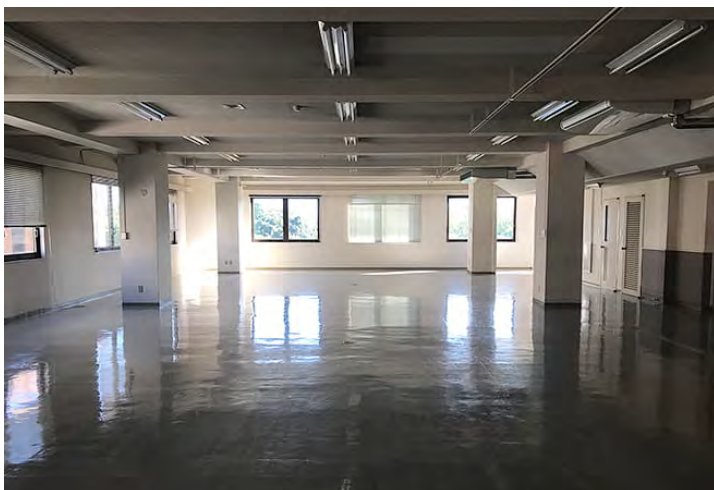
This property, a former office space owned by Blooming Nakanishi & Company, was rented and renovated by Mitsubishi Estate Residence, then sublet to FIKA which will operate it as a hostel. The renovation focused on utilizing the existing features and atmosphere of the building, while inaugurating the hostel front desk on the first floor, along with a café operated by FIKA and a renovated Blooming Nakanishi shop.

In addition, the company is promoting its Renovation Business, which buys individual units or whole buildings of existing condominiums to be renovated and resold, mainly in the Tokyo metropolitan area.

Renovation is environmentally friendly as it enables revival of buildings with less environmental impact than demolition and new construction. Moving forward, the company will continue promoting these businesses in its efforts to realize a sustainable society through the revitalization of the housing market and the effective utilization of existing building stock.

### The ParkRex OHORIKOEN

#### Dormitory area



Before renovation



After renovation



## Exterior (after renovation)



Building exterior after renovation



Renovated entrance

## Major Renovation of Otemachi Building

Since 2018, Mitsubishi Estate has been carrying out large-scale renovation work on the Otemachi Building, an office building completed in 1958 and thus more than 60 years old. These renovations were completed in May 2022. In addition to an overall upgrade of the building itself, including improvements to the exterior walls and interior, and construction of a lounge and terrace for the building and neighborhood workers, Mitsubishi Estate created new networking spaces where people and companies come together, enabling venture companies and start-ups to interact with large companies. Responding to the social demand for effective use of building stock, Mitsubishi Estate will continue to embrace the challenge of buildings that last for 100 years with the aim of creating value in the form of hubs for the generation of new businesses.

The Otemachi Building has excellent transportation access as it is directly connected to Otemachi Station, where users can take five different subway lines. In addition, the building has large floor plates with a shape suitable for subdivision into small parcels to lease. Mitsubishi Estate opted for renovations so that it could quickly provide diverse interaction and open innovation in the Marunouchi area, bringing together the cutting-edge technologies of multiple companies.

Furthermore, in terms of eco-friendly urban development through renovation, the project enabled a reduction of waste and building materials compared to demolition and new construction. The project has also reduced future management costs through the use of an alkali-resistant, glass reinforced cement (GRC), which is much more durable and fire resistant than ordinary cement, as the main exterior wall material. In addition, the introduction of LED lighting and adoption of Low-E double glazing with superior heat insulation properties and window frames with embedded sunshades have improved environmental performance, including energy savings from reduced heat load (reduction of approximately 44%). Mitsubishi Estate has also developed a 4,000m<sup>2</sup> open space atop the building as the Otemachi Building Skylab, the largest rooftop space for an office building in Tokyo, and created a greenery-filled workspace and the vegetable garden The Edible Park Otemachi by Grow (658m<sup>2</sup>, operation by PLANTIO, Inc.), creating a new environmentally-friendly space for interaction.



Otemachi Building before renovation



Otemachi Building after renovation

## Yurakucho SLIT PARK Aimed at Reconstruction of Yurakucho Utilizing Existing Building Stock

On June 1, 2022, Mitsubishi Estate opened Yurakucho SLIT PARK, a renewal of the laneway space between the Shin-Kokusai Building and the Shin-Nisseki Building in the Marunouchi area. The name of SLIT PARK embodies the concept of turning lanes in urban areas into parks. The dimly-lit space, which was previously used as a bike-parking area and as service entrances, has been transformed into an urban park space overflowing with light and greenery. The project embodies Mitsubishi Estate's commitment to utilization of existing building stock in the reconstruction of the Yurakucho area, and incorporated attempts to reuse waste materials from the construction for decorating the space. The project has also served to enhance pedestrian mobility by connecting Daimyo-Koji Avenue and Marunouchi Naka-dori Avenue via SLIT PARK.

Equipped with wi-fi and power, it can also be used as a space for work. Other features include the provision of food, drink, and merchandise services by kitchen cars and food stalls and the holding of events in which anyone is free to participate, making it a place where people can interact and create a community.

Laneway on the Daimyo-Koji Avenue side  
(Before renewal)Laneway on the Daimyo-Koji Avenue side  
(After renewal)



# Completion of Renovations at Warwick Court, the Group's First Major Office Refurbishment Project in the United Kingdom

Mitsubishi Estate London Limited, a subsidiary of Mitsubishi Estate in the United Kingdom, completed a refurbishment project on Warwick Court in the City of London in July 2022. Warwick Court is part of Paternoster Square (construction completed in 2003), the first office developed in the U.K. by the Mitsubishi Estate Group, and the new project also marks the first major office refurbishment the Group has undertaken in the United Kingdom.

One major feature of this project is sustainability and consideration of the environment. By using the building's existing exterior design and structural elements to the fullest extent during the course of refurbishment and repurposing stone embellishments inside the entrance, CO2 emissions were reduced by approximately 70% in comparison with all-new construction. Moreover, facilities contributing to the well-being of workers were expanded with the establishment of a rooftop terrace and a terrace for the exclusive use of tenants as well as bicycle parking and showers and lockers for bicycle commuters. With these efforts, the project is expected to earn the BREEAM Excellent rating in building sustainability.

In addition to the above initiatives, the updating of facilities and private interior furnishings and refurbishment of the entrance have earned a grade-A London office building rank, creating an office with new value at a superior location.



Photo from the building front



Aerial photo  
(the property is the square building  
on the lower left of the square)



View from the terrace



## Preventing Pollution

### Introducing Biodegradable Straws and Other Eco-Friendly Items at Royal Park Hotels

The Mitsubishi Estate Group's Royal Park Hotels and Resorts have been promoting initiatives for the Sustainable Development Goals (SDGs). These initiatives include the introduction of biodegradable straws in 2018, the introduction of guestroom amenities made from biomass, and mineral water using 100% recycled plastic bottles<sup>\*1</sup> as measures to eliminate plastic from April 2022. These measures have now been introduced at 18 hotels<sup>\*2</sup> around Japan. (Not all measures are implemented at all hotels.)

Biodegradable straws are a product that has obtained the GreenPla® mark from the Japan BioPlastics Association (JPBA) and are made from plant-derived natural cycle resin using polylactic acid obtained from starch such as cornstarch. Royal Park Hotels and Resorts is working to reduce the impact on the natural environment from waste by replacing the approximately 280,000 straight plastic straws used annually with a plant-derived product.

Royal Park Hotels and Resorts is gradually switching its guestroom amenities<sup>\*3</sup> to SINTOWORLD's Eco-Amenity Series, which is an eco-friendly biomass product that uses raw materials containing rice husks and recycled plastics, as well as packaging materials made from paper. The hair brushes, shower caps and tooth brushes have obtained Biomass Mark 40<sup>\*4</sup>.

The introduction of mineral water using 100% recycled plastic bottles is also aimed at reducing waste and promoting recycling. Recycled plastic bottles, which use recyclable plastic sourced from the plastic bottles collected from the general public, are environmentally friendly in promoting a reuse cycle for plastic bottles.

\*1 Some hotels are, alternatively, not providing mineral water in guest rooms.

\*2 Sendai Royal Park Hotel, Royal Park Hotel (Nihonbashi, Tokyo), Yokohama Royal Park Hotel, The Royal Park Hotel Iconic Tokyo Shiodome, The Royal Park Hotel Iconic Kyoto, The Royal Park Hotel Iconic Osaka Midosuji, The Royal Park Hotel Tokyo Haneda, The Royal Park Hotel Kyoto Sanjo, The Royal Park Hotel Kyoto Shijo, The Royal Park Hotel Kyoto Umekoji, The Royal Park Hotel Hiroshima Riverside, The Royal Park Hotel Fukuoka, The Royal Park Canvas – Sapporo Odori Park, The Royal Park Canvas - Ginza 8, The Royal Park Canvas - Nagoya, The Royal Park Canvas Kyoto Nijo, The Royal Park Canvas - Osaka Kitahama, The Royal Park Canvas Kobe Sannomiya

\*3 Toothbrushes, hair brushes, razors, shower caps, towels, and cotton pads

\*4 A mark that can be displayed on products with a biomass content of 10% or more (dry weight) with certain quality and safety standards.

## Managing Hazardous Substances

The Mitsubishi Estate Group manages and disposes of hazardous substances appropriately in accordance with relevant laws and regulations. The Group carries out disposal and procedures appropriately in accordance with laws and regulations regarding the fluorocarbon refrigerants in air conditioners and PCBs used in electrical equipment and manage them rigorously to prevent leakage and release. The Group also conducts timely surveys to identify the presence of asbestos and soil contamination and implements the appropriate countermeasures and management according to the situation.



## Preventing Water Pollution

The restaurants and similar establishments above a certain size located in facilities managed and operated by the Mitsubishi Estate Group are subject to regulation by laws and ordinances related to water pollution. At facilities that are subject to the regulations, the Group has installed wastewater treatment facilities, and wastewater is treated to meet standards before being released into sewers and public waterways such as rivers and the sea.

## Preventing Soil Pollution Around Condominiums

Mitsubishi Estate Residence conducts soil pollution studies prior to acquiring property for development, and we enact soil pollution prevention measures and remedies as needed.

The employee in charge uses a property acquisition checklist to review the property, and a further review of that information is carried out by a dedicated surveying company. The acquisition of property comes with the obligation to attach and submit the dedicated surveying company's survey report, and after making an acquisition decision, we are obligated to have a dedicated surveying company conduct a detailed survey (history survey) regardless of whether there is any danger posed by pollution. For the land sales contract, we clarify the duties and responsibilities of the land's seller with regard to pollution, and we implement whatever measures are necessary.

### Assisting Customers During Condominium Site Acquisition






## Environment

# Conserving Water Resources

## Basic Policy and Approach

The effects of climate change brought about by global warming have led to a greater risk of water shortages worldwide. In Japan, there are doubts about the continued stable supply of water from dams due to changing rainfall patterns in recent years. To mitigate the effect of water shortages on socio-economic activities and ensure the stable use of water, it is important to systematically promote the efficient use of water resources and enact strategies based on supply and demand considerations. We also view access to sanitation-controlled water as one of the basic human rights.

Based on this perception of the challenges, the Mitsubishi Estate Group not only complies with the laws and regulations of each country where we operate, but also promote initiatives in line with international goals, initiatives, and international standards, including the SDGs, and will implement urban development along with building development and operation giving consideration to the efficient use of and preservation and conservation of water resources and will continue working in collaboration with tenants, joint venture partners, local people involved in urban development, and government agencies to use water efficiently and reduce usage.

## Initiatives for Efficient Water Use

Each company in the Mitsubishi Estate Group has built an environmental management system (EMS) and manages and implements targets for environmental activities, including water management.

See the following for the Mitsubishi Estate Group's environmental management promotion system.

[Environmental Management Promotion System](#)



See the following for data on water use.

[ESG Data > Environmental Data](#)





## Goals and Achievement Status

The Mitsubishi Estate Group sets goals in accordance with its business models. For example, installation of water-saving toilets as well as kitchens, wash basins, and showers that conserve hot water is standard in The Parkhouse series of condominiums supplied by Mitsubishi Estate Residence.

See the following for water-related data.

[ESG Data > E: Environmental data > \(2\) Other](#)



## Implementing Water Risk Assessments

The Mitsubishi Estate Group periodically implements assessments of water stress and water risk for properties covered by SBTs in and outside Japan using Aqueduct, an assessment tool developed by the World Resources Institute (WRI).

The risk level does not rise to the "medium-high" category in any of the areas where the Group's properties are located. For the time being, it is considered that there are no major concerns related to water use and wastewater, etc. However, the Group will continue to monitor water use and risk level at each site every fiscal year.

When developing and operating real estate in regions rated as "high" or "extremely high" risk levels, where water stress or risk is high, the Group will strive for efficient water use to mitigate impact on the local environment and engage in the appropriate consultation and dialogue with external stakeholders to ensure the proper use of water.

See the following for the results of water risk assessment.

[ESG Data > E: Environmental data > \(2\) Other](#)







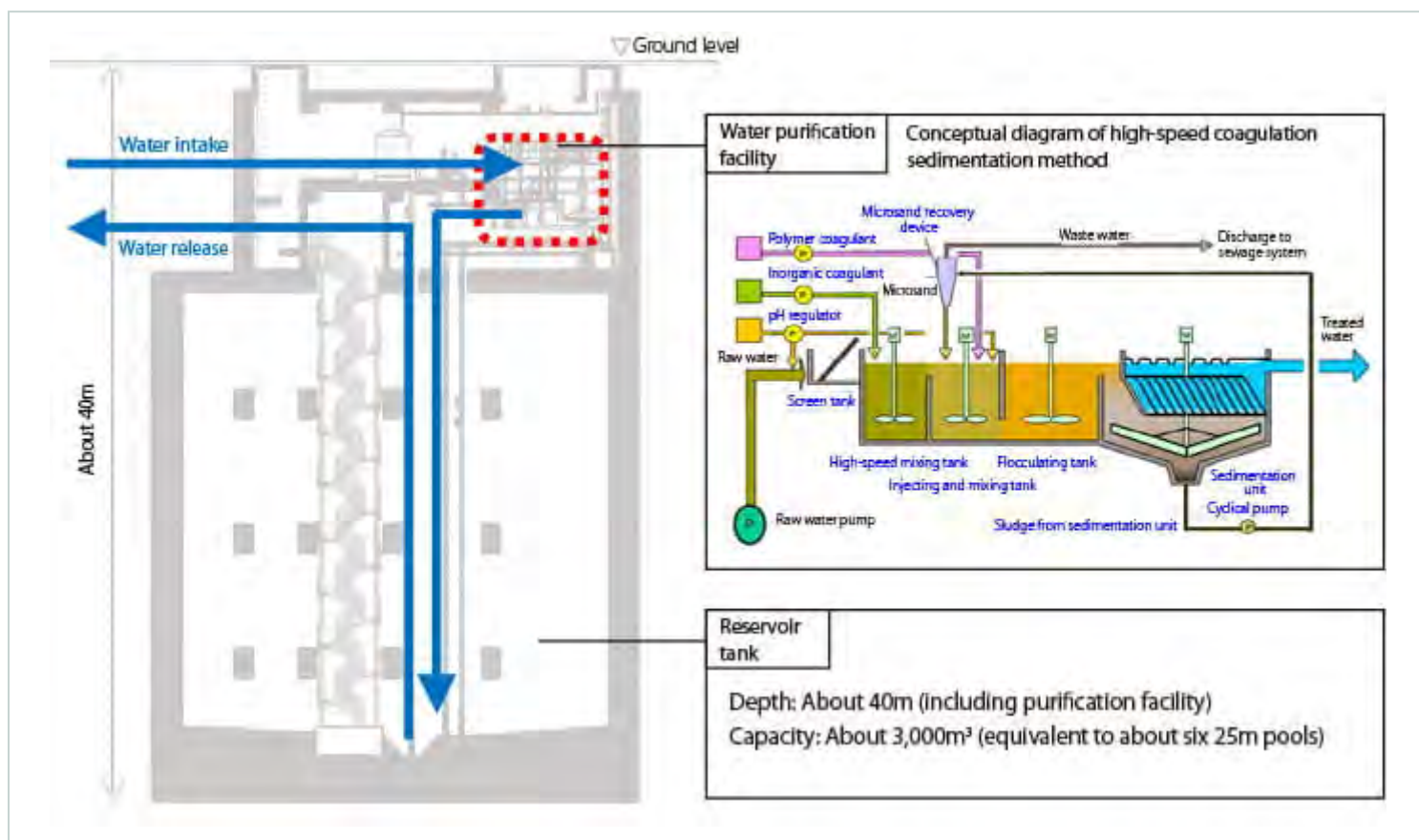
# Initiatives for Improving Water Quality

## Otemon Tower-ENEOS Building Equipped with Water Purification Facility for Imperial Palace Moat

The quality of the water in the Imperial Palace moat has deteriorated significantly as the result of a lack of fresh water. The Otemon Tower-ENEOS Building, which was completed in November 2015, is the first private-sector project to introduce a rapid water purification facility capable of purifying up to 500,000m<sup>3</sup> of water per year to improve water quality in the Imperial Palace moat. Additionally, to prevent water from stagnating as a result of low water levels in the moat, the facility is also equipped with a massive water reservoir capable of replenishing water equivalent to about six times the volume of a 25m swimming pool. Since the completion of the project, the rapid water purification facility has been slowly but surely helping improve the quality of the water in the moat.



### Cross-section view of purification and reservoir facility





# Initiatives for Efficient Use of Recycled Water

The Mitsubishi Estate Group uses recycled water obtained by processing cooling tower blowdown, tenant kitchen wastewater, and rainwater for flushing toilets and watering outdoor plantings.

## Utilizing Recycled Water on Gyoko Dori Avenue in Public-Private Collaboration

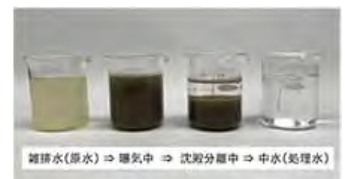
Gyoko Dori is an avenue stretching from the Marunouchi Central Gate of Tokyo Station to Hibiya Dori Avenue. Since fiscal 2010, in collaboration with the Bureau of Construction, Tokyo Metropolitan Government, Mitsubishi Estate has been implementing measures against the heat island phenomenon to curb increases in road surface temperature by sprinkling recycled water from the Marunouchi Building on this avenue. As the sprinkled water evaporates due to the high temperature it lowers the temperature of its surroundings, thereby decreasing the road surface temperature.

As part of this initiative, the Tokyo Metropolitan Government Bureau of Construction installed water retaining paving on the roadway that can store water within the paving of Gyoko Dori Avenue. Mitsubishi Estate installed equipment for sprinkling the recycled water from the Marunouchi Building on the road.

## Utilizing Recycled Water at Sunshine City

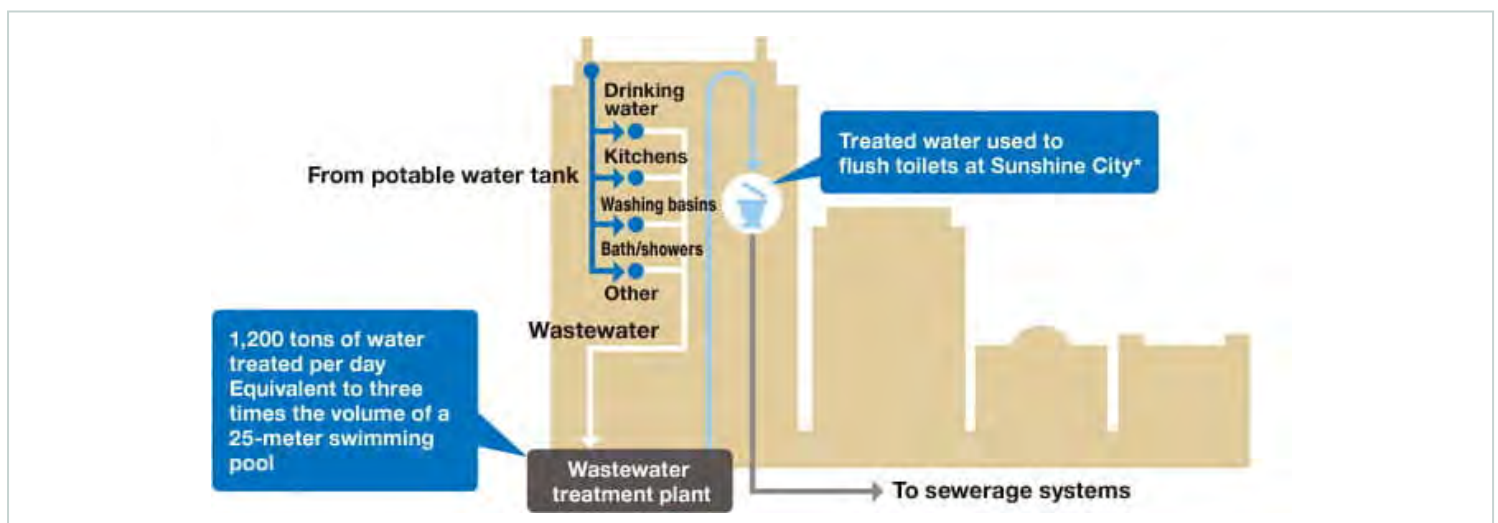
Sunshine City employs a wastewater recycling system to recover water used in its building, using the activated sludge method which treats wastewater with the power of bacteria.

The treatment system was installed 40 years ago when Sunshine City was first built. It was the first recycled wastewater system installed in Japan for a single building. The treatment plant is located in the 3rd floor basement of the Sunshine 60 Building. In a single day it recovers up to 1,200 tons of wastewater from toilet sinks, kitchen wastewater, and drain water from the Hotel bathrooms. The treated recycled water is used to flush toilets inside the building.



Process for producing recycled water

## Wastewater Recycling System



\* Excluding water used in warm-water washing toilet seat



# Environment

## Preserving Biodiversity

### Policy on Biodiversity

The Mitsubishi Estate Group has implemented a policy of reducing and avoiding the impact and fostering harmony between nature and human society as part of the Mitsubishi Estate Group Basic Environmental Policy. Through its business activities, the Group considers biodiversity and promotes the creation of an attractive society in harmony with nature.

In addition, the Group does not engage in development in areas designated as World Heritage Sites or in areas designated as I through IV under the International Union for Conservation of Nature (IUCN). When the Group engages in development of land likely to have an impact on biodiversity, it consults with governments, NGOs, and other external partners to take appropriate mitigation measures and remedial action.

In accordance with these policies, all Group companies consider biodiversity in the course of their business activities and develop biodiversity-friendly initiatives cooperating with NPOs and other external partners. The Group also promotes obtaining the Association for Business Innovation in harmony with Nature and Community's ABINC certification at properties with a certain amount of green space.

Through such initiatives, the Group strives to achieve a net positive impact. The Group also asks tier 1 suppliers as well as non-tier 1 suppliers to take similar initiatives aimed at a net positive impact as it works to achieve its goals throughout the value chain.



## Goals and Achievement Status

As part of its efforts to ensure development in tandem with consideration for biodiversity, the Group promotes projects while holding hearings with governments and other external stakeholders starting from the project concept stage in order to comply appropriately with various environment-related laws and regulations (Forest Act, Urban Park Act and Natural Parks Acts, and Nature Conservation Act, etc.)

For example, before development, the Group works with governments to survey and provide specific protection for rare species, relocating them if necessary and periodically monitoring and reporting on them after relocation. For large-scale developments, the Group conducts an evaluation of the impact on the surrounding environment (an environmental assessment) in accordance with the Environmental Impact Assessment Act.

Moreover, Mitsubishi Estate Residence, which works on housing projects, has implemented the BIO NET INITIATIVE\* as a program to plant trees and plants in a manner that will consider preserving biodiversity for all of its condominiums to be developed under The Parkhouse, the mainstream brand for the company's built-for-sale condominiums, regardless of the project size and land area. In implementing the initiative, the company has prepared biodiversity preservation guidelines composed of five main actions.

The guidelines incorporate actions such as not using invasive plants including specified foreign organisms and invasive alien species defined by the government, confirming the local plants around the project site and nurturing vegetation that is suitable for the area, and reducing chemical spaying as much as possible to lessen impact on earthworms and mole crickets, in addition to promoting the growth of plants utilizing the vital energy of the soil. The plan is to reduce the impact on the habitat of plants and animals in the area around the development and provide stopovers for diverse organisms through planting and maintenance.

In this way, the program provides an environmentally-friendly habitat for these diverse organisms while reducing the impact on biodiversity, and thereby strives to achieve a net positive impact, including the creation of habitat for plants and animals in the surrounding area.

As of May 2020, there were more than 175 projects nationwide where BIO NET INITIATIVE has been adopted.

## Five Actions and Specific Examples

Actions	Specific examples
(1) Protect	- Do not use invasive plants such as specified foreign organisms and invasive alien species defined by the government.
(2) Nurture	- Confirm the local plants around the project site and nurture vegetation that is suitable for the area. - Use Japanese native species for at least 50% of plantings.
(3) Connect	- Help to secure stopovers for birds and butterflies flying in the area by creating an affinity with street greenery in the neighborhood and incorporating local native species.
(4) Utilize	- Reduce heavy pruning as much as possible and utilize the natural shapes of the trees. - Reduce chemical spraying as much as possible to lessen impact on earthworms and mole crickets, in addition to promoting the growth of plants utilizing the vital energy of the soil.
(5) Reduce	- Control the incidence of weeds and reduce weed control costs through dense plantings of low shrubs and ground cover and the spreading wood chips, etc. on the surface to reduce exposure of the soil.

\* The initiative commenced in February 2015.

See the following for more information on efforts related to the BIO NET INITIATIVE.

[BIO NET INITIATIVE website \(Japanese only\)](#)





## Initiatives in the Marunouchi Area

### Working to Improve the Waterfront Environment and Preserve the Ecosystem of the Imperial Palace Moat

In recent years, the biota of the Imperial Palace moat had become degraded, hindering the natural generation of its native water plants. In October 2017, Mitsubishi Estate signed an agreement with the Ministry of the Environment to promote use of natural resources of the Imperial Palace Outer Garden, and launched the Moat Project in May 2018. The project aims to improve the waterfront environment of the Imperial Palace moat and conserve the endangered rare water plant species. This is the first such project for a private company, implemented through a collaboration with NGOs and other institutions, including the Ministry of the Environment, the Nature Conservation Society of Japan, the National Institute for Environmental Studies (NIES) Center for Climate Change Adaptation (CCCA), and the Natural History Museum and Institute, Chiba.

Flora and fauna taken from the moat are transferred to a container biotope atop a building owned by Mitsubishi Estate or Hotoria Square\*, thereby preserving it outside the area as alternatives to the Imperial Palace water environment.

Rare dragonflies such as the red damselfly are congregating in ponds where the water plants are transplanted, and the restoration of the Mizohakobe (waterwort) (*Elatine triandra var. pedicellata*), previously regarded as extinct in the 23 wards of Tokyo on the Tokyo Red List 2010, was successfully reintroduced in fiscal 2019.

Moreover, since 2019, water chestnuts cleared from the Imperial Palace moat in the project have been composted. The vegetables grown with the compost in Yatsugatake are used by the Mitsubishi Estate Group, creating a new resource cycle.

In addition to restoring and preserving the water environment, including the rare flora and fauna, the project aims to build a biodiversity network in the neighborhood around the moat, thereby revitalizing the ecosystem that was once widespread in the area, as well as utilizing these activities to create a more attractive city.

\* Hotoria Square is an eco-friendly green space of approximately 3,000 square meters located at the foot of the Otemachi Park Building and Otemon Tower-ENEOS Building in front of the Imperial Palace Outer Garden. Plantings mainly consist of native and local species that are found in the grove of the Imperial Palace. Also found in the square are a gently sloping body of water, stone walls, and nesting boxes for birds. Through these initiatives, Mitsubishi Estate is promoting environmental improvement and ecosystem preservation in the Marunouchi area of Tokyo.

→ Successful reintroduction of Mizohakobe (waterwort) (*Elatine triandra var. pedicellata*), an aquatic plant previously regarded as extinct in the 23 Tokyo wards, from mud in the Imperial Palace moat (Japanese only) [PDF](#)





## Biomonitoring in the Marunouchi District

The Marunouchi District is bordered by the Imperial Palace and moat, Hibiya Park, and other green spaces that conserve the precious natural ecosystem in this urban neighborhood, making it a good place to observe varied animal and plant life throughout the year. Mitsubishi Estate has been running a biomonitoring survey in the Marunouchi district since 2009, in collaboration with the NPO Center for Ecological Education. It compiled the results of the survey and published the Marunouchi Living Things Handbook in June 2013. The Handbook provides information about the abundance of nature in the district and also suggests ways in which individuals can help protect biodiversity in their own areas. By doing so, the Handbook aims to function as a PDCA tool for ecosystem management in the district.



This initiative received positive feedback and won the Japan Committee for UNDB Award in the Tokyo Region Biodiversity Contest, held at the GTF Green Challenge Awards 2013 organized by the GTF Greater Tokyo Festival Executive Committee. The company will press on with its efforts to preserve biodiversity in the future.

Marunouchi Living Things Handbook (Japanese only)



## Initiatives in The Edible Park Otemachi by Grow, the Otemachi Building's Rooftop Vegetable Garden

In May 2022, Mitsubishi Estate completed a major renovation of the Otemachi Building, originally constructed in 1958, and opened the Otemachi Building Sky Lab, a rooftop area of approximately 4,000m<sup>2</sup>, creating a new space for human interaction.



The Otemachi Building Sky Lab features The Edible Park Otemachi by Grow (658m<sup>2</sup>, management: PLANTIO, Inc.), Tokyo's biggest rooftop vegetable garden, in addition to a lush green workspace and other areas that, prior to its renewal, had been a typically utilitarian commercial building rooftop.

About 40 kinds of vegetables will be grown based on user participation starting from the stage of soil preparation, with the focus being on heirloom vegetable species considered native to Tokyo. The "grow GO" vegetable growing app allows users to monitor the growth of vegetables and take part in harvesting upon maturation. The aim is for the vegetable garden to become a hub for sustainable interaction with workers in the building, visitors, and food handlers through agriculture and food.

The Edible Park Otemachi by Grow (Japanese only)





# Initiatives in Other Areas

## Mitsubishi Estate Residence Obtains ABINC Certification (Condominium Category)

Mitsubishi Estate Residence has continued to obtain the Association for Business Innovation in harmony with Nature and Community's ABINC certification in the condominium category, certified annually since 2014, when this particular category was first launched.

Mitsubishi Estate Residence has been promoting BIO NET INITIATIVE, a biodiversity preservation program since February 2015 at The Parkhouse, the mainstream brand for the company's built-for-sale condominiums. Under this initiative, the company develops greenery plans for each condominium premise in a manner that will help preserve biodiversity. The company aims to obtain ABINC certification (condominium category) with projects that demonstrate particularly high levels of contribution to preservation of biodiversity.

We will continue to make efforts in environmentally friendly urban development and residential development for the preservation of biodiversity and sustainable use.

### About ABINC certification (condominium category)

ABINC certification (condominium category) evaluates and certifies efforts at companies such as the creation of green spaces that consider biodiversity and the management and use of green spaces, from the four perspectives of creating environments that contribute to biodiversity, maintenance and management that considers biodiversity, communication activities, and other initiatives. Specifically, the 18 categories below have been established as the criteria for evaluation.

### 18 categories of ABINC certification (condominium category)



- |  |  |  |
|--|--|--|
| <b>1</b> Size of area that contributes to biodiversity   | <b>2</b> Cubic volume of greenery                            | <b>3</b> Creation of cohesive green spaces                                       |
| <b>4</b> Depth of soil that supports plants  | <b>5</b> Harmony with surrounding environment                | <b>6</b> Creation of vegetation that is rooted in the community                  |
| <b>7</b> Creation of high-quality rooftop and wall greenery that contributes to preservation of biodiversity | <b>8</b> Consideration of animal habitat and movement routes | <b>9</b> Appropriate management of types and volumes of chemical substances used |
| <b>10</b> Consideration of water environment   | <b>11</b> Consideration of the material cycle                | <b>12</b> Monitoring of indicator organisms                                      |
| <b>13</b> Measures to counter non-native species   | <b>14</b> Qualifications of managers, etc.                   | <b>15</b> Collaboration with the community and experts                           |
| <b>16</b> System of resident, management association, and residential management trustee initiatives         | <b>17</b> Promotion of environmental education programs      | <b>18</b> Preservation of rare local species                                     |



See the following for information on ABINC certification status.

ESG Data > E: Environmental data > (2) Other > 5. Green Building Certification →

List of Properties with DBJ Green Building and /ABINC Certifications (PDF 1.2MB)

PDF

## Conservation and Protection Activities to Pass Down the Nature of Miyakojima, Okinawa Prefecture to the Next Generation

Shimoiijishima Airport Management, a member of the Mitsubishi Estate Group, has been operating the passenger terminal facilities at Miyako Shimoiijishima Airport Terminal in Miyakojima, Okinawa Prefecture, since March 2019. The Mitsubishi Estate Group initiated in July 2018 new activities to protect the rich natural environment of the Miyakojima area.

In May 2019, we collaborated with Miyakojima City, The Nature Conservation Society of Japan, the non-profit organization Miyako Island Sea Environmental Network, and Wild Bird Society of Miyako, among others, to conduct environmental conservation activities. Some 50 Mitsubishi Estate Group employees took part.

As part of the activities, we have been working to protect the grey-faced buzzard, an endangered migratory bird that migrates to Miyakojima. The area around Miyakojima is one of the most diverse bird habitats in Japan, and there have been confirmed sightings of grey-faced buzzards from all over Japan congregating and resting their wings in an area near the airport during October. We are establishing a forest suitable for grey-faced buzzards in which to rest. We also conduct clean ups of beaches where marine trash and microplastic flotsam are major concerns along with environmental training for Group employees to learn about the nature of Miyakojima.

The Mitsubishi Estate Group will continue to promote protection of the rich natural environment as well as development of the local economy.



Environmental training (fiscal 2019 event)



Beach cleanup to remove trash drifting in from Japan and overseas (fiscal 2019 event)





## Sunshine Aquarium Coral Conservation Activities

Sunshine Aquarium, operated by Sunshine City, a Mitsubishi Estate Group company, is an urban aquarium located in a high-rise building, and it is the first of its kind in Japan. Conceived as an “oasis in the sky,” its considerable ingenuity reveals the true form of living creatures in dynamic exhibitions that provide the sensations of the sky, light, water, and greenery. Since opening in 1978, it has served the four roles of an aquarium: environmental education, recreation, research, and conservation of species. It has been particularly focused on providing visitors with “impressive discoveries” to stimulate their interest in the biological environment. In 2006, the aquarium launched the Coral Project in cooperation with Onna Village in Okinawa Prefecture, and has been implementing two initiatives: the Coral Restoration Project and the Coral Reef Regeneration Project.

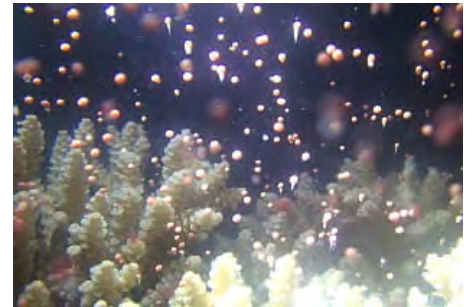
The coral reefs, which are the symbol of thriving marine environment, are in a gradual decline due to factors such as coral bleaching caused by global warming of the oceans, the natural enemy of coral. The decline of coral also risks the destruction of the surrounding marine ecosystem, leading to seas that will be uninhabitable for living creatures. In order to remedy this situation, Onna Village in Okinawa Prefecture has been implementing coral conservation activities, led by the fishermen's cooperative, since 1969. In support of these activities, Sunshine Aquarium launched a permanent exhibition on the coral of Onna and commenced the Coral Restoration Project, under which the aquarium temporarily removes part of the coral of Onna Village, grows it in tanks, and then returns it to the seas of Okinawa. This makes it possible to preserve the DNA of the coral of the Onna Village and reproduce it even if the coral is damaged due to natural disaster or environmental degradation. Since 2014, the aquarium has also implemented the Coral Reef Regeneration Project, which aims to regenerate coral reefs via sexual reproduction, with the fertilization of coral eggs by sperm. The aquarium will continue these activities into the future with the hope of restoring the coral reefs.



Coral returned in the Coral Restoration Project



Coral spawning in the Coral Reef Regeneration Project



Coral Project (Japanese only)





## Initiatives at MARK IS Minatomirai

MARK IS Minatomirai is a commercial complex located in the Minatomirai area of Yokohama, Kanagawa. Based on the concept of a "life entertainment mall," it offers a variety of products and services so that all shoppers can enjoy a relaxing visit and find what they need to lead fulfilling lives.

Everyone's Garden is a nearly 1,000m<sup>2</sup> rooftop garden on the fifth floor that brings a lush green space to the city environment of Yokohama. Here, visitors will find a diverse variety of plant life with approximately 80 species, including over 30 types of fruit trees including citrus varieties, and various garden vegetables. In addition to the orchard and vegetable garden, there is also a vegetable garden terrace that visitors can use for things discovered and picked in the garden.

Everyone's Garden is a casual venue that offers city dwellers a rare chance to commune with the earth and nature. It is designed and operated as a place to be enjoyed by visitors while preserving biodiversity and significantly contributing to the environment.



Orchard



Vegetable garden



Vegetable garden terrace

Facility operation and management: Mitsubishi Jisho Property Management Co., Ltd.

Vegetable garden management: Green Wise Co., Ltd.

### Biodiversity preservation initiatives at Everyone's Garden

#### 1. Biodiversity conscious planting

The diverse environmental plan includes over 30 types of fruit trees, vegetation that bears fruit for creatures and serves as sources of nectar, along with vegetable gardens and small rice paddies, etc.

#### 2. Human and creature friendly plant care methods

Garden management methods are planned and utilized to both care for the plants and create an environment where people, small birds, and insects can gather and rest.

#### 3. Designed to attract living creatures

The garden is designed as an environment where small birds can feed, rest, and raise their young, coexisting with insects while exerting a positive influence on plants

#### 4. Activities that teach about living things in a fun way

Rather than conventional environmental activities, activities are planned in a way so that visitors can enjoy nature while resulting in contributions to the environment.

\* Check the MARK IS Minatomirai website for the latest event information, measures to prevent the spread of COVID-19, and opening hours. (Japanese only)

→ [MARK IS Minatomirai official website](#)



## Watch the following video clips to learn more about living creatures and plants at Everyone's Garden (Japanese only)

A Stroll in Everyone's Garden



Let's Identify Various Types of Leaves!



MARK IS Minatomirai is ABINC certified by the Association for Business Innovation in harmony with Nature and Community.



MARK IS Minatomirai



## Environment

# Promoting Sustainable Use of Wood

## Basic Policy and Approach

The Mitsubishi Estate Group has established a policy of fostering harmony between nature and human society as part of the Mitsubishi Estate Group Basic Environmental Policy. The Group is committed to no gross deforestation and promoting the sustainable use of wood as it considers biodiversity through its business activities.

Moreover, in the area of Environment, one of the Key Themes stated in the Mitsubishi Estate Group 2030 Goals for SDGs, the Group has set goals for promoting the sustainable use of wood and ensuring the traceability of wood used in business activities. It will continue working for sustainable uses of wood giving consideration to respecting human rights and protecting natural resources in areas where imported timber is harvested.

## Targets and Status of Achievement

From the perspective of human rights and environmental protection, the Mitsubishi Estate Group uses timber based on the Sustainable Sourcing Code (certified timber or Japan-grown timber) or equivalent as the timber in the concrete wall panels used when building offices or housing with a target of achieving a usage rate of 100% by fiscal 2030 to eliminate forest destruction. Moreover, in the Mitsubishi Estate Group Green Procurement Guidelines, the Group stipulates use of timber products certified by forest certification systems that can verify that they are from properly managed forest resources, and mandates consideration given to promoting the use of Japan-grown timber. This applies to all of the products, services, designs, and construction procured by the Mitsubishi Estate Group, and the Group requests the cooperation of all suppliers.

The Group also complies with policies on the sustainable use of timber and forest-related laws and regulations and has developed mechanisms to monitor and ensure compliance.

See the following for the Mitsubishi Estate Group's latest Japan-grown timber usage rate.

[ESG Data > E: Environmental data](#)





# Primary Initiatives

## Promoting Use of Cross Laminated Timber (CLT)

The Mitsubishi Estate Group promotes sustainable manufacturing by using Japan-grown timber. In recent years, the Group has promoted the use of cross laminated timber (CLT) as a construction material that expands timber usage opportunities.

[Promoting Utilization of CLT to Further Expand Use of Japan-grown Timber](#)



## Making Use of Japan-grown Timber for Wall Frames and Structural Timber

Mitsubishi Estate Home actively utilizes Japan-grown timber with clear traceability in order to ensure the appropriate use of forest resources and the sustainable development of the timber industry. By using Japanese timber in a sustainable way, the company helps to create sound and well-maintained forests, contributing to a forest cycle of "plant, raise, use, and plant."

See the following for data on use of Japan-grown timber

[ESG Data > E: Environmental data > \(1\) KPI > 2. Resources \(Waste, Water, Forestry Resources, etc.\)](#)



### Initiatives with material for wall frames

Since 2015, due to reasons including the revision of Japan Agricultural Standards for Japan-grown lumber and jointed lumber, Mitsubishi Estate Home has created a system for the stable procurement of domestically grown timber produced under thorough quality management, through such means as individually measuring the strength of each Japanese cedar lumber used for wall frames.

Mitsubishi Estate Home began using Japan-grown timber for its wall frames in new homes using the 2×4 method in all homes as a standard practice from November 2018. As a result, the percentage of Japan-grown timber used for the structural timber in new custom-built homes has reached the highest level among 2×4 homebuilders in Japan.



Example of construction of wall frames using Japan-grown timber



## Projects to promote the use of Japan-grown timber

Mitsubishi Estate Group is working to promote efficient and increased use of timber grown in Yamanashi Prefecture in collaboration with the Group's initiative "**Experience Nature**" Project. This program strives to promote interaction between urban and rural residents in Hokuto City, Yamanashi. In April 2018, Mitsubishi Estate began using FSC-certified Japan-grown timber for the laminated wood used in floor structures as a standard practice.\* The Group promotes the responsible use of forests in a way that is both economical and sustainable, and is working to create a cyclical society that coexists with nature.



Example of use of Japan-grown timber

In addition, Mitsubishi Estate Housing Components is promoting the use of Japan-grown timber in structural parts of single homes. In August 2010, it acquired an international standard (FSC-CoC certification) so that it could distinguish between these and other products in the chain of custody.

FSC-N002014

The FSC® (Forest Stewardship Council®) logo issued by the Forest Stewardship Council certifies that the wood or wood fibers used in a product were produced from forests managed properly in terms of the environment, society, and the economy. The mark provides a guarantee that the forest was assessed by an independent third-party organization based on principles and standards stipulated by the Council.

\* Excludes some products

## Building a network that can sustain a forest economy





# Mitsubishi Estate Home Launches the KIDZUKI Concept to Promote Wooden Structures and Finishes

From preventing global warming and reinvigorating local communities, the advantages of wooden structures and finishes has been widely recognized and their need has increased rapidly in recent years. Using our knowledge of wood accumulated over many years at Mitsubishi Estate Home, we have launched the KIDZUKI concept to promote wooden structures and finishes not only among buildings, but across a wide range of fields.

The name KIDZUKI is a portmanteau of the Japanese words for wood, awareness, and to build, encapsulating the idea of creating new value. The aim is for KIDZUKI to be a platform for various wood-based ideas and projects, forming a network to share issues, needs, and solutions among business operators in various fields, governments, and creators.

In collaboration with a number of wood furniture makers, projects are under way to develop original wooden products, as well as regional revitalization projects through effective use of wood in cooperation with universities and government agencies. We aim to build a full-featured platform as a networking venue for learning more about wood and augmenting its possibilities.

KIDZUKI (Japanese only)



## World's First Flat Mass Timber Construction Method Developed – A New Timber-Constructed Custom-Built Home Brand is Born

To meet the needs of customers who demand a greater level of freedom in their wooden homes, Mitsubishi Estate Home has developed the world's first patented technique called the Flat Mass Timber (FMT) Construction Method and unveiled ROBRA brand of wooden custom-built homes utilizing this method.

The FMT Construction Method is a hybrid technique that uses both wood and steel frames. By making the most of large cross-section laminated wood plank panels, a simple, strong design can be achieved with minimal intrusion of construction elements such as walls and beams into living spaces. This method allows for greater freedom over designs, including dynamic concepts that allow myriad placement options. This is the world's first patented construction method, and was registered in October 2019.

ROBRA is the brand for wooden custom-built homes using the FMT Construction Method. Based on the brand concept, "turning wooden structures into art," it delivers style unconstrained by time and place, achieved inside single, large living spaces. Embracing the current worldwide shift toward wood in the construction industry, the brand offers the possibilities of environmentally friendly wood applications in fresh exterior design concepts. The company started offering ROBRA homes in September 2020, with its first model home debuting at Komazawa Stage 1 Home Gallery.

Among medium-sized wooden structures as well, we have been selected as the business operator for a development project at a new location owned by the Tokyo metropolitan government in the Kohoku area of Adachi-ku, and the FMT construction method is being used on the first floor where a tenant is scheduled to move in.



Structural body



Exterior view



Exterior view (artist's rendering)



Interaction space (artist's rendering)





## Manufacturing Environmentally-Friendly, Highly Durable Wall Panels with High Yield Strength

Mitsubishi Estate Housing Components manufactures highly durable, high yield strength wall panels with approximately 14 times the strength of conventional panels for use in four-story wooden structures built with the 2×4 method. The panels use Shinshu larch for 24 mm thickness structural plywood, which is not normally used for houses. They also use domestic Japanese hinoki cypress and Japanese cedar for laminated wood and laminated wall supports. Additionally, 54% of the building's frame is made from Japan-grown timber, helping revitalize the domestic forestry industry. Furthermore, the insides of the wall panels are able to secure the equivalent of 68 tons of CO<sub>2</sub>, making them environmentally-friendly wooden structures.



Construction using highly durable, high yield strength wall panels

## Engagement with External Stakeholders

In September 2018, Mitsubishi Estate initiated the Construction and Real Estate Human Rights Due Diligence Study Group in which eight real estate and construction-related companies participate. As part of this initiative, the company holds study groups with other companies in these industries on the use of sustainably sourced timber from the perspective of environmental protection and respect for human rights. The aim of discussions at the study group is to deepen understanding about the risks of environmental destruction, including violation of human rights and destruction of forests and to expand the use of sustainably sourced timber going forward.

See the following for more details on the study group.

[Launch of the Construction and Real Estate Human Rights Due Diligence Study Group](#)








# Environment

## Promoting Acquisition of Sustainability Certifications





### Policy on Obtaining Sustainability Certifications

Mitsubishi Estate recognizes that addressing environmental and social considerations in real estate and indicating performance on these considerations externally is important to meet the expectations and demands of stakeholders such as tenants and investors. Therefore, the company has a policy of proactively obtaining sustainability certifications whenever possible.

In Japan, Mitsubishi Estate has obtained certifications that include DBJ Green Building Certification, Comprehensive Assessment System for Built Environment Efficiency (CASBEE), and Building-Housing Energy-efficiency Labeling System (BELS), while the main certifications obtained overseas include Leadership in Energy and Environmental Design (LEED) and BRE Environmental Assessment Method (BREEAM) certifications.

Evaluation/Certification System	Overview
DBJ Green Building Certification	<p>DBJ Green Building Certification is a certification system established by the Development Bank of Japan (DBJ) in April 2011 as an initiative to support environmentally and socially conscious management of real estate. Based on a comprehensive assessment which covers such areas as environmental performance, disaster prevention, community considerations and other stakeholder engagement, the system evaluates and certifies real estate anticipated by society and the economy.</p> <p>→ <a href="#">DBJ Green Building Certification</a> </p>
Comprehensive Assessment System for Built Environment Efficiency (CASBEE)	<p>CASBEE is a system for comprehensively assessing the quality of buildings, including interior comfort and consideration to landscape as well as environmental considerations such as energy conservation and use of materials and equipment with low environmental impact. It was developed by a research committee established for comprehensive environmental assessment of buildings in April 2001 as a collaborative project between industry, academia, and government under the auspices of the Ministry of Land, Infrastructure, Transport and Tourism, and has been continuously upgraded and maintained since.</p> <p>→ <a href="#">Institute for Building Environment and Energy Conservation</a> </p>
Building-Housing Energy-efficiency Labeling System (BELS)	<p>BELS is a system for the assessment and certification of energy efficiency performance in newly built and existing buildings by a third-party organization. In April 2016, the scope of the system was expanded to residential buildings, and it was designated as one of the third-party certifications in the Guidelines on Building Energy Efficiency Labelling based on Article 7 of the Act on the Improvement of Energy Consumption Performance of Buildings (Building Energy Efficiency Act).</p> <p>→ <a href="#">Association for Housing Performance Evaluation and Labeling (Japanese only)</a> </p>



Evaluation/Certification System	Overview
Leadership in Energy and Environmental Design (LEED) certification	<p>LEED is a system for assessing environmental performance of buildings and site use developed and operated by the U.S. Green Building Council (USGBC).</p> <p>→ <a href="#">U.S. Green Building Council</a> </p>
BRE Environmental Assessment Method (BREEAM) certification	<p>BREEAM is an environmental assessment system developed by Building Research Establishment Ltd. (BRE) in the UK in 1990 as a tool for assessing the sustainability performance of buildings, communities, and infrastructure.</p> <p>→ <a href="#">BREEAM</a> </p>
WELL Building Standard	<p>This is an environmental performance evaluation system for buildings and urban subdivisions with a focus on health and wellness. It is operated by International WELL Building Institute (IWBI) and certification is handled by Green Business Certification Inc. (GBCI). The latest version, WELL v2, was launched in 2020, and consists of the following 10 concepts: air, water, nourishment, light, movement, thermal comfort, sound, materials, mind, and community.</p> <p>→ <a href="#">WELL</a> </p>
SITES Certification	<p>The Sustainable SITES Initiative (SITES). Designed by the U.S. Green Building Council (USGB), which designs and updates the LEED rating system, the certification is administered by Green Business Certification Inc. (GBCI) in the U.S. It offers guidelines and a quantitative evaluation system on green infrastructure design, technology, and management. Certification is now available outside the U.S. with v2.</p> <p>→ <a href="#">The Sustainable SITES Initiative (SITES)</a> </p>



# Environmental Design Policies and Incentive Programs

In working toward achieving the goals put forth in “Environment,” a key theme in Mitsubishi Estate Group 2030 Goals for SDGs, Mitsubishi Estate has established real estate development environmental design policies as well as incentive programs for leading projects, to promote real estate development business that contributes to sustainability goals.

The Company has established the Sustainability-Minded Construction Architectural Design and Construction Policies for real estate development that outline the conditions required by type and scale, in areas such as design specifications, building materials, and construction methods. This document is included with a written quote outline when we receive construction projects.

Additionally, in fiscal 2022, the Company launched programs that provide incentives to those implementing advanced sustainability initiatives in the process of deciding on investments in new development projects.

## Architectural Design and Construction Policies



The following policies were established with an aim of achieving Mitsubishi Estate Group 2030 Goals for SDGs and decarbonized society

1. Acquisition of sustainability certifications
2. Initiatives to improve energy-saving performance
3. Introduction of renewable energy source and equipment
4. Use of water
5. Selection of building materials
6. Building material attributes, certifications, etc.
7. Sustainability efforts at construction sites

## Incentive Programs



**Promote sustainable development projects internally by introducing incentives such as relaxation of investment criteria with projects that meet certain sustainability requirements**

# Goals and Achievement Status

See the following for the status of environmental certification acquisitions.

[ESG Data > E: Environmental data > \(2\) Other > 5. Green Building Certification](#)



[List of Mitsubishi Estate Group Properties with DBJ Green Building and ABINC Certifications \(PDF 1.2MB\)](#)





# Acquisition of WELL Core Precertification under WELL v2 for the Chiyoda 1-Bancho Project (Tentative Name) — Supporting Workstyles That Emphasize Well-Being

Mitsubishi Estate has become the first company in Japan to receive precertification for WELL Core—which can be acquired by buildings occupied by tenants—under WELL v2, the latest version of the WELL Building Standard (WELL Certification), an international ratings system for buildings that emphasizes the health and well-being of people. The Company received the precertification for the Chiyoda 1-Bancho Project (tentative name), which it is advancing in Chiyoda Ward, Tokyo, for reasons including the high evaluation of the project's promotion of urban development in line with WELL development concepts, the introduction of a panel heating and cooling system, the facilitation of fitness for workers, and the provision of operable windows that offer ample natural light. Following completion of the project, we aim to obtain platinum certification, the standard's highest certification level.

Recent years have seen an increasing number of companies acquiring WELL Certification for areas of buildings reserved for office space. However, meeting the WELL Core certification standards for the actual building has the advantage of enabling tenant companies to more easily pursue WELL Certification for their office spaces by, for example, exempting them from screening for certain evaluation items. With the preliminary certification as a forerunner to further efforts, we will continue proactively supporting workstyles that emphasize well-being and enhancing office value from the perspective of concern for the environment.



Chiyoda 1-Bancho Project at the time of the precertification announcement; view of building exterior



# Acquisition of SITES<sup>®</sup> Gold Certification for Tokiwabashi Tower and TOKYO TORCH Park, Thereby Becoming the First Urban Mixed-Use Development Project in Japan to Acquire Such Certification

TOKYO TORCH Tokiwabashi Tower and TOKYO TORCH Park have acquired SITES<sup>®</sup> Gold Certification, an environmental certification that evaluates primarily the sustainability of landscapes, becoming the first urban mixed-use development project to receive such a certification in Japan.

Furthermore, these sites have been newly registered under Edo-Midori Green Area, a system by the Tokyo Metropolitan Government for registering and publicly announcing green spaces where native plant species are actively planted and where biodiversity is conserved. With this registration, TOKYO TORCH Tokiwabashi Tower and TOKYO TORCH Park have now acquired five environmental certifications—the others being DBJ (Development Bank of Japan) Green Building Certification, Social and Environmental Green Evaluation System (SEGES) certification, and Association for Business Innovation in Harmony with Nature and Community (ABINC) certification—bringing them to a globally leading level in terms of environmental awareness.

Going forward, we will continue to promote urban development with an even greater awareness of the environment, with the goal of opening all sites of the TOKYO TORCH project by fiscal 2027.



TOKYO TORCH Park

**THE Sustainable**  
**SITES**  
**Initiative<sup>®</sup>**





# Efforts to Acquire Environmental Certification in Overseas Business

The Mitsubishi Estate Group operates globally. Since Mitsubishi Estate New York was established in 1972, we have expanded our real estate development and rental business in the U.S., the U.K. and other European countries, as well as Asia and Oceania, making the most of our track record and wide-ranging network. We are engaged in socially and environmentally conscious urban planning with people in these regions.

## Initiatives in the United States

In the U.S., the Mitsubishi Estate Group carries out a wide range of projects, primarily through Rockefeller Group International. In addition to owning and operating large-scale office buildings in areas of Manhattan in New York, the Rockefeller Group manages a range of development projects around the country, including office, residential, industrial, and mixed-use projects. Industrial projects in particular have established the Group as a leading developer in the main industrial markets of New Jersey and the Inland Empire, California. Moreover, the industrial sector is expected to expand further due to the dramatic growth of e-commerce within the U.S. over the past few years. It aims to raise the value of real estate with a focus on environmental performance, and therefore works to acquire LEED certification on both its new development buildings and existing buildings.

### Projects earning environmental certification (examples)



#### GOLD

##### 1271 Avenue of the Americas, New York

Located in Manhattan, this building completed in 1959 underwent large-scale renovations from 2016 to 2019. The entire outer curtain wall was replaced and the air conditioning equipment was replaced with energy efficient models, resulting in the building attaining LEED Gold status in 2020.



#### GOLD

##### 1901 L Street, Washington, D.C.

Located in central Washington, D.C., this building was co-developed with the U.S. real estate company The Meridian Group. It is the result of an extension on a 1970s office building and large-scale renovations. The building was completed in 2019 following environmentally-friendly plans and was awarded a Gold LEED rating.



#### GOLD

##### Paradigm River North, Colorado

Located in central Denver, this 8-story, 19,000 m<sup>2</sup> office building was jointly developed with local real estate company Jordon Perlmutter & Co. Construction began in 2022 with a planned completion date of 2025. With environment-friendly plans, we are aiming for a Gold LEED rating.



## Initiatives in Europe

Since the establishment of Mitsubishi Estate London in 1986, the Mitsubishi Estate Group has handled real estate leasing and development projects for office and leasing properties in central London and continental Europe. With an emphasis on the environmental aspects of its properties the Group has earned BREEAM certification for newly developed buildings as well as buildings already owned.

### Projects earning environmental certification (examples) **BREEAM**



**Outstanding** (planned)

#### 8 Bishopsgate (tentative name), London

8 Bishopsgate (tentative name) is a high-rise office building in London whose construction began in February 2019, and is expected to be completed in fiscal 2022. In addition to installing a biodiversity-conscious outdoor terrace, the building is equipped with environment-friendly, sustainable features, including a closed, double-skin glass façade, providing good environmental performance that is easy to maintain, and advanced rainwater storage and reuse systems. The project is expected to earn a BREEAM Outstanding rating.



**Excellent**

#### Warwick Court, London

Completed in July 2022, this building made the most of the original edifice's exterior and structural elements during the course of refurbishment while repurposing stone embellishments inside the entrance, resulting in a CO<sub>2</sub> emissions reduction of approximately 70% in comparison with all-new construction. Moreover, facilities contributing to the well-being of workers were expanded with the establishment of a rooftop terrace and a terrace for the exclusive use of tenants as well as bicycle parking and showers and lockers for bicycle commuters. With these efforts, the project is expected to earn the BREEAM Excellent rating in building sustainability.

## Initiatives in Asia and Oceania

In Asia and Oceania, the Group established the subsidiary Mitsubishi Estate Asia Pte. Ltd. in Singapore in 2008, followed by Mitsubishi Estate (Shanghai) Ltd. in China in 2013. The Group opened its Taiwan Representative Office in 2017 and established Mitsubishi Estate Taiwan Ltd. in 2018, PT. Mitsubishi Estate Indonesia and Mitsubishi Estate Vietnam Company Ltd. in 2019, Mitsubishi Estate (Thailand) Co., Ltd. in 2020, and Mitsubishi Estate Asia Pte Ltd in Australia in 2021. The Group operates in Singapore, Indonesia, Vietnam, Thailand, Malaysia, and the Philippines, Australia, and China, developing office, residential, and retail properties.





## Projects earning environmental certification (examples)



### Trinity Tower, Indonesia

This is a large-scale office building project which Mitsubishi Estate has developed jointly with The Gesit Companies, Santini Group, and Shimizu Corporation. The project was awarded Best Green Development in the PropertyGuru Indonesia Property Awards 2018, which is given to outstanding real estate projects in Indonesia, in recognition of its advanced environmentally-friendly initiatives. With the commencement of building operation in July 2021, the project earned a Gold rating by the Green Building Council Indonesia (GBCI) in its GreenShip New

Building (NB) Version 1.2 rating platform.



### CapitaSpring, Singapore

November 2021 saw the completion of CapitaSpring, a mixed-use facility in the center of Singapore that Mitsubishi Estate had developed jointly since 2017 with CapitaLand Group, one of Asia's largest real estate companies. Consisting primarily of offices, CapitaSpring is a high-rise, large-scale, mixed-use facility with 51 aboveground floors and a total floor area of more than 93,000 m<sup>2</sup> and features serviced apartments, retail facilities, and other amenities. With its outstanding environmental performance—highlighted by its exterior design evoking nature, efficient use of water and energy, a green area for strolls, and an extensive green area provided by the rooftop

garden—CapitaSpring has received Green Mark Platinum, the highest award for the Building and Construction Authority (BCA) Green Mark, Singapore's most recognized environmental performance indicator. Through this facility, we propose new styles of working and living to a wide range of people near Raffles Place station, Singapore's foremost office area.



### Parkline Place, Australia

At Parkline Place, a premium office building project, where development is under way in Sydney with the Oxford Properties Group and their subsidiary Investa, Mitsubishi Estate concluded a financing agreement for use as property construction funds thanks to a Green Loan\*. Using the funds from this loan, we plan to engage in

environmental design that promotes efficient use of energy and resources, and to recycle approximately 90% of construction waste. Through these efforts we aim to attain 6-Star status, the highest level of Australia's real estate environmental certification as well as Core and Shell Certification v3 in the international WELL Building Standard certification program for health and wellbeing.

See the following for more information on green loans.

[Sustainability Activities \(ESG\) > Environment > Adopting Sustainable Finance](#)





## Environment

# Adopting Sustainable Finance

## Issuance of Mitsubishi Estate Sustainability-Linked Bonds

With the aim of realizing a sustainable world, the Mitsubishi Estate Group established the Mitsubishi Estate Group Sustainability Vision 2050 expressing its vision for 2050 and the Mitsubishi Estate Group 2030 Goals for SDGs as a milestone setting out the concrete themes and actions for achieving this vision. In its Long-Term Management Plan 2030 as well, the Group has also established sustainability as a key driver for providing value through its business and is seeking to solve social issues through business activities.

In July 2022, to further promote initiatives aimed at the realization of a sustainable world, the Group formulated the Mitsubishi Estate Sustainability Vision 2050-Linked Bond Framework and issued sustainability-linked bonds in accordance with the framework. Sustainability-linked bonds are bonds with variable financial and structural characteristics depending upon the achievement of sustainability targets that a company sets in advance. The Mitsubishi Estate Sustainability Vision 2050-Linked Bond Framework has obtained a third-party opinion from Japan Credit Rating Agency, Ltd., a third-party evaluation organization, on its alignment with the ICMA Sustainability-Linked Bonds Principles 2020 and the Ministry of the Environment's Green Loan and Sustainability Linked Loan Guidelines 2020.



## Overview

<b>Name</b>	Mitsubishi Estate Co., Ltd. 139th – 141st Unsecured Bonds (Mitsubishi Estate Sustainability-Linked Bonds)		
<b>Terms decision date</b>	July 15, 2022		
<b>Issue</b>	139th bonds	140th bonds	141st bonds
<b>Issue date</b>	July 22, 2022	July 22, 2022	July 22, 2022
<b>Redemption date</b>	July 22, 2027	July 22, 2032	July 22, 2052
<b>Term</b>	5 years	10 years	30 years
<b>Issue amount</b>	20.0 billion yen	20.0 billion yen	20.0 billion yen
<b>Interest rate</b>	0.360%	0.644%	1.543%
<b>KPIs</b>	Percentage of electricity from renewable energy sources	Percentage of reduction in total GHG emissions, including CO <sub>2</sub> , in the Group's value chain	(1) Percentage of reduction of total GHG emissions, including CO <sub>2</sub> , in the Group's value chain (2) Percentage of female managers
<b>SPTs<sup>*1</sup></b>	Achieve 100% by FY2025	At least 70% for Scope 1 and 2 combined, at least 50% for Scope 3 (base year: FY2019)	(1) Achieve net zero by 2050 (2) Achieve 40% by FY2050
<b>SPTs determination date</b>	December 31, 2026	December 31, 2031	December 31, 2051
<b>Bond characteristics after determination</b>	In the event there is no third-party verified reporting by the determination date that the SPTs have been achieved, donations will be made or voluntary credits that have been certified under a Japanese program or by an international certification organization will be purchased before the redemption date.		
<b>Bond ratings</b>	AA- (Rating and Investment Information, Inc. (R&I)), A+ (S&P Global Ratings Japan Inc.), A2 (Moody's Japan K.K.)		

\*1 Sustainability Performance Targets. Targets for improvement in measurable KPIs on which issuers commit to a predefined timeline

See the following press releases for more information.

- Issuance of Mitsubishi Estate's First Sustainability-Linked Bond (PDF 516KB) (Japanese only) [PDF](#)
- The Mitsubishi Estate Sustainability Vision 2050-Linked Bond Framework (PDF 2,437KB) (Japanese only) [PDF](#)
- Formulation of New Group-Wide Targets for Reducing CO<sub>2</sub> and Other Greenhouse Gases and Announcement of 2050 Net-Zero Based on a New Standard Defined by SBTi (PDF 547KB) [PDF](#)
- Mitsubishi Estate Group 2030 Goals for SDGs



## Third-Party Opinion on Alignment

### Third-Party Opinion

The bonds are issued based on the Mitsubishi Estate Sustainability Vision 2050-Linked Bond Framework in line with the ICMA Sustainability-Linked Bond Principles 2020 and the Ministry of the Environment Green Loan and Sustainability Linked Guidelines 2020, and a third-party opinion on alignment has been obtained from a third-party evaluation organization.

See the following for details of the third-party opinion from Japan Credit Rating Agency, Ltd.

Third-Party Opinion from Japan Credit Rating Agency, Ltd. (PDF 3,733KB) (Japanese only)



## Announcement of Investment in the Sustainability-Linked Bonds

See the following press release for information on investors who have announced their investment in the Mitsubishi Estate Sustainability-Linked Bonds.

Issuance of Mitsubishi Estate's First Sustainability-Linked Bonds (2)  
- Issuance of Total 60.0 Billion Yen in Sustainability-Linked Bonds - (PDF 539KB) (Japanese only)



## Targets Related to the Sustainability-Linked Bond SPTs

Issue	KPIs		SPTs		Determination date
139th bonds (5 years)	KPI1	Percentage of electricity from renewable energy sources * Joined R100	SPT1	Achieve 100% electricity from renewable energy sources by FY2025	December 31, 2026
140th bonds (10 years)	KPI2	Percentage of reduction in total GHG emissions, including CO <sub>2</sub> , in the Mitsubishi Estate Group's* <sup>1</sup> value chain * Obtained SBTi Net-Zero Standard certification from the SBTi in June 2022	SPT2-1	At least 70% for Scope 1 and 2 combined, at least 50% for Scope 3 by FY2030 (base year: FY2019)	December 31, 2031
141st bonds (30 years)			SPT2-2	Achieve net zero by 2050	December 31, 2051
141st bonds (30 years)	KPI3	Percentage of female managers* <sup>2</sup>	SPT3	Achieve 40% female managers by FY2050	December 31, 2051

\*1 Selection of target organizations is based on control criteria. Properties in which the Mitsubishi Estate Group's ownership rights and trust beneficiary rights are less than 50% are excluded from data calculations in principle.

\*2 A person in a job which has subordinates or a person in an equivalent position without subordinates



## CO<sub>2</sub> Emissions/Renewable Power Targets

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See the following for details.

Mitsubishi Estate Group 2030 Goals for SDGs > Key Theme 1: Environment



## Female Manager Targets

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See the following for details.

Sustainability Activities (ESG) > Social > Promoting Diversity > Empowerment of Women





# Mitsubishi Estate Green Bond Issued

The mission of the Mitsubishi Estate Group is to contribute to the creation of a truly meaningful society by building attractive, environmentally sound communities where people can live, work and relax with contentment.

In June 2018, in order to raise funds for the Tokyo Station Tokiwabashi Project currently underway in front of the Nihonbashi exit of Tokyo Station, Mitsubishi Estate issued the Mitsubishi Estate Green Bond, the first in Japan from an integrated real estate company. The Mitsubishi Estate Green Bond was issued based on a framework in accordance with the Green Bond Principles published by the International Capital Market Association (ICMA), and Mitsubishi Estate obtained an opinion on compliance with the principles from a third-party certification institution.

The Mitsubishi Estate Green Bond also obtained the highest GA1 rating in an R&I Green Bond Assessment carried out by Rating and Investment Information, Inc. which evaluates the extent to which proceeds from the issuance of a green bond are used to invest in projects that contribute to solving environmental problems.

## Overview

<b>Name</b>	Mitsubishi Estate Co., Ltd. 127th unsecured corporate bonds (Mitsubishi Estate Green Bond)
<b>Date of determination of issuance terms</b>	June 20, 2018
<b>Date issued</b>	June 26, 2018
<b>Maturity date</b>	June 26, 2023
<b>Term</b>	5 years
<b>Total amount issued</b>	20 billion yen
<b>Use of proceeds</b>	All funds will be used to finance the construction of Tower A of the Tokyo Tokiwabashi Project facing Tokyo Station. → <a href="#">Project website (Japanese only)</a>
<b>Bond rating</b>	AA- (Rating and Investment Information, Inc.) A+ (Standard & Poor's Global Ratings Japan) A2 (Moody's Japan)

See the following press releases for your reference (Japanese only).

→ [Announcement of the Issuance of Mitsubishi Estate Green Bond to Fund Construction of Tower A of the Tokiwabashi District Redevelopment Project in front of Tokyo Station \(PDF 270KB\)](#)

→ [Mitsubishi Estate Unveils New Name for Its Tokyo Tokiwabashi Project as "TOKYO TORCH" \(PDF 4.3MB\)](#)

→ [Mitsubishi Estate Completes Tokiwabashi Tower \(PDF 5.7MB\)](#)



## Third-Party Ratings Concerning Eligibility

### Second party opinion

The bonds were issued based on a framework that followed the Green Bond Principles published by the International Capital Market Association, and the company obtained opinions from a third party certification organization regarding the bond's eligibility as a green bond.

Second Opinion from Sustainalytics  
(Japanese only) (PDF 820KB)



### Green bond assessment

The R&I Assessment evaluates the extent to which funds raised through green bonds are invested in business projects that solve environmental projects. This project received the highest rank of GA1 in the Assessment.

[R&I Green Bond Assessment] Mitsubishi  
Estate Co., Ltd. Mitsubishi Estate Green  
Bond: GA1 Assessment (PDF 799KB)



### Ministry of the Environment issuance model cases

The company filed an application for the bond to be considered as a model case by the Ministry of the Environment for its Models of Green Bond Issuance in 2018. It was selected and has confirmed with the Ministry and its contractors that the bond complies with the Green Bond Guidelines 2017.

Pre-Issuance Report (Japanese only) (PDF  
1.37MB)



## Mitsubishi Green Bond Investment Announcements

Please see the following press release for information on investors that have announced their investments in the Mitsubishi Estate Green Bond.

Announcement (3) of the issuance of the Mitsubishi Estate Green Bond to fund the Tower A of the Tokiwabashi District Redevelopment Project in front of Tokyo Station - Terms determined today with an issue amount of 2 billion yen and an interest rate of 0.09% (PDF 270KB) (Japanese only)





# Allocation Report

Mitsubishi Estate has confirmed that the funds procured from the issue of green bonds to finance the construction of the Tokiwabashi District Redevelopment Project Tower A in front of Tokyo Station have been used in full. The Finance & Accounting Department executive officer in charge of these matters has filed a management assertion regarding the appropriation of these funds.

Procured Appropriations	Appropriations Used	Appropriations to Be Used
19,931 million yen	19,931 million yen	0 million yen

As of July 17, 2020

Management Assertion (Japanese only) (PDF 50KB)

PDF

## Details of the Tokiwabashi District Redevelopment Project

- A large-scale redevelopment project covering a total area of 3.1 hectares, the largest in the vicinity of Tokyo Station. It includes the development of an approximately 390m super high-rise tower that will become a new landmark for the city of Tokyo and a spacious plaza measuring approximately 7,000m<sup>2</sup> that will transform the area in front of Tokyo Station, all of which will be developed and equipped in stages. The project is a designated project for the National Strategic Special Zone Program.
- The project will be carried out in stages over a 10-year period while maintaining and updating vital infrastructure functions including sewage pumps and transformer substations within the district.
- As a designated project for the National Strategic Special Zone Program, this project will be located in the middle of the Tokyo's chief business center and is positioned to be known as the Tokyo Global Financial Center. To that end it is intended to contribute to urban redevelopment in the following ways:
  1. Renewal of urban infrastructure, creation of a pedestrian network, preparation of a plaza, etc.
  2. Creation of a hub to enhance international competitiveness (finance/business exchange and urban tourism).
  3. Creation of superior disaster management and an eco-conscious urban environment.

→ TOKYO TORCH project website (Japanese only)



A rendering of TOKYO TORCH overall at the time of its opening as seen from the Marunouchi side of JR Tokyo Station





## DBJ Green Building Certification

Tower A for the Tokiwabashi District Redevelopment Project in front of Tokyo Station has been awarded the Development Bank of Japan (DBJ) Green Building certification as a building that exhibits the highest level of “environmental and social awareness” in Japan (certification obtained March 29, 2019). The structure was subsequently renamed Tokiwabashi Tower and awarded the DBJ Green Building certification upon its completion (certification obtained August 6, 2021).



## Use of Sustainability Linked Loan (SLL)

### Conclusion of SLL Agreement with The Norinchukin Bank

#### First Loan Agreement (Execution Date: May 29, 2020)

Mitsubishi Estate concluded the Japanese real estate industry's first loan agreement based on a sustainability linked loan (SLL) with The Norinchukin Bank.

Mitsubishi Estate established the Mitsubishi Estate Group Sustainability Vision 2050 with the aim of realizing a sustainable society and formulated Mitsubishi Estate Group 2030 Goals for SDGs in the Long-Term Management Plan 2030 as the milestones that define the themes and actions in working to achieve this vision. The Group has set out and works toward concrete numerical targets related to climate change. The vision and initiatives were evaluated as contributing to solving climate change issues, which The Norinchukin Bank considers important, leading to the conclusion of the loan.

An SLL aims to support environmentally and socially sustainable business activities and growth by establishing sustainability performance targets (SPTs) based on the borrower's management strategy and linking the loan terms to the achievement of the SPTs. The loan established the Group's targets on CO2 emissions (target for 2030: 30% reduction from 2017) and renewable electricity rate (target for 2030: 25%), which were set out in Mitsubishi Estate Group 2030 Goals for SDGs as the SPTs. Mitsubishi Estate plans to use a portion of the funds obtained from the loan for initiatives contributing to expanding the introduction of renewable electricity and reducing CO2 emissions.

On conclusion of this loan agreement, a third-party opinion on the alignment of the loan with the SLL Principles and the appropriateness of the SPTs established was obtained from Japan Credit Rating Agency, Ltd.

#### Overview of the Loan

- Execution date: May 29, 2020
- Loan period: 11 years and three months
- Amount: 11.5 billion yen
- Application of funds: Long-term working funds

Third party opinion from Japan Credit Rating Agency, Ltd. (Japanese only) (PDF 1.6MB)



Announcement on Entering into Sustainability Linked Loan Agreements (Japanese only) (PDF 510KB)





## Second Loan Agreement (Execution Date: October 14, 2022)

Mitsubishi Estate concluded loan agreements based on SLLs with The Norinchukin Bank, which will be the second such loans following the one executed on May 29, 2020.

Mitsubishi Estate has been striving to establish concrete numerical targets for climate change initiatives under the Mitsubishi Estate Group 2030 Goals for SDGs set out in the Long-Term Management Plan 2030. Moreover, in March 2022, the company announced 2050 Net-Zero (obtained SBT net zero certification from the SBTi in June 2022) and decided to press further with its initiatives.

These loans have set SPTs that are based on the targets under the Mitsubishi Estate Group 2030 Goals for SDGs and 2050 Net-Zero.

Mitsubishi Estate plans to use a portion of the funds obtained from the loans for initiatives contributing to expanding the introduction of renewable electricity and reducing CO2 emissions.

On conclusion of these loan agreements, a third-party opinion on the alignment of the loans with the SLL Principles and the appropriateness of the SPTs established was obtained from Japan Credit Rating Agency, Ltd.

### Overview of the Loans

#### Loan (1)

- Execution date: October 14, 2022
- Loan period: 11 years
- Amount: 25.0 billion yen
- Application of funds: Long-term working funds

#### Loan (2)

- Execution date: October 14, 2022
- Loan period: 6 years
- Amount: 25.0 billion yen
- Application of funds: Long-term working funds

Third party opinion from Japan Credit Rating Agency, Ltd. (Japanese only) (PDF 3.0MB)

[PDF](#)

Announcement on Entering into Sustainability Linked Loan Agreements (Japanese only) (PDF 532KB)

[PDF](#)



# Positive Impact Finance loan agreement signed

In November 2021, Mitsubishi Estate signed a Positive Impact Finance (with unlimited use of funds) loan agreement with Sumitomo Mitsui Trust Bank, Limited.

Positive Impact Finance (PIF) is financing based on the Principles for Positive Impact Finance proposed by the United Nations Environment Programme Finance Initiative. As part of this program, financial institutions comprehensively analyze and evaluate both the positive and negative impact corporate activities have on the environment, society, and economy, as they provide loans with the aim of continued support. The most significant feature of the program is that the level of contribution to achieve Sustainable Development Goals (SDGs) through a company's activities, products, and services is used as evaluation indicators and monitored based on publicly disclosed information.

## Overview of the initiative

<b>Date of agreement</b>	November 30, 2021
<b>Loan period</b>	10 years
<b>Loan amount</b>	5 billion yen
<b>Use of funds</b>	Long-term operating funds

In order to help achieve a sustainable society through its business activities, the Mitsubishi Estate Group has established the Mitsubishi Estate Group Sustainability Vision 2050 and has set out the Mitsubishi Estate Group 2030 Goals for SDGs as part of its Long-Term Management Plan 2030, detailing themes and actions established as milestones for achieving this vision.

In concluding this agreement, Sumitomo Mitsui Trust Bank qualitatively and quantitatively assessed the Group's initiatives in the four areas of focus that the impact Mitsubishi Estate Group 2030 Goals for SDGs sets out – namely, environment, diversity & inclusion, innovation, and resilience – areas that particularly have impact toward achieving SDGs. See the following press release for further details.

Notice regarding the Conclusion of a Positive Impact Finance (with unlimited use of funds) Loan Agreement (PDF 357KB)



This program has obtained a third-party opinion from Japan Credit Rating Agency, Ltd. as its assessment procedures being compliant to the Principles for Positive Impact Finance Principles as well as for the rationality of the evaluation indicators employed.

The Japan Credit Rating Agency website for further details (PDF 1.6MB)





# Use of Green Finance for Office Building Development Project in Sydney, Australia

In December 2021, Mitsubishi Estate entered into a green loan agreement to fund construction of Parkline Place, a premium office building development project being undertaken in Sydney, Australia, in partnership with Oxford Properties Group and its subsidiary Investa.

A green loan is a loan in which the use of funds is restricted to projects that have an effect on improving the environment. This is the first time that Mitsubishi Estate has used a green loan to raise funds for an overseas project.

Mitsubishi Estate plans to use the funds from the loan to promote an environmental design that will help improve efficient use of energy and resources and for initiatives such as recycling approximately 90% of construction waste. Through these initiatives, the company aims to obtain the highest 6-Star rating in Australia's Green Star<sup>\*1</sup> real estate environmental certification system. The company is also considering provision of work-life management, mindfulness, personal health and other such services in addition to environment-related initiatives with the aim of obtaining Core and Shell<sup>\*2</sup> Certification under WELL Certification (WELL Building Standard<sup>\*3</sup>), which is an international certification concerned with health and well-being.

## Overview of Green Loan

- Contract month: October 2021
- Lender: Gresham Property (GPF No. 8 Fund)
- Borrowing amount: AUD 700 million (approx. JPY 56.9 billion [AUD1 = JPY81<sup>\*4</sup>])
- Borrowing period: October 2021 – March 2024 (planned)
- Application of funds: Construction costs for Parkline Place

\*1 A real estate environmental certification system operated by the Green Building Council of Australia

\*2 A category of certification within WELL Certification that mainly applies to newly-constructed tenanted buildings.

\*3 A U.S. certification system that evaluates buildings and spaces from the perspective of human health and well-being.

\*4 As of December 2021

See the following press release for more details.

Mitsubishi Estate Announces Green Loan Funding for Parkline Place, its Office Building Development in Sydney, Australia (Japanese only) (PDF 448KB)

