Group Action Plan to Realize Decarbonized Society

Toward Realization of Decarbonized Society

In recent years, natural disasters have become more severe and more common, and climate change is occurring on a global scale.

The Paris Agreement, an international framework for action against climate change, has accelerated international movement, and it has become increasingly important for companies to contribute to the sustainable growth of society through their business.

Based on the philosophy of the Mitsui Fudosan " 🌲 " logo, our Group has achieved corporate growth by enriching people's lives and constantly creating new value through the creation of neighborhoods that meets the needs of the era and coexists with society in harmony.

Under our " & **EARTH** " principle, we have also been proactively addressing climate change for some time.

In December 2020, our Group's greenhouse gas emission reduction targets for FY2030 and FY2050 were announced; however, we have this time raised the reduction target for FY2030 even higher, and formulated Action Plans as comprehensive and specific strategies to achieve the targets. Background of the Group's Corporate Stance and Decarbonization Initiatives New target setting



Former targets: 30% reduction by FY2030 (vs. FY2019), Net Zero by FY2050

Key Action Plans

Steadily implement initiatives for FY2030 with supply chain Further promote actions to realize a decarbonized society in FY2050



Refer to the ESG data page and environment-related data for CO₂(GHG) emissions.

Toward FY2030

Action Plan 1 Improve environmental performance of new and existing properties

New properties

Realize ZEB/ZEH level* environmental performance for all properties

* ZEB/ZEH level: BEI level with environmental performance equal to or higher than ZEB/ZEH Oriented, excluding some properties.

Key strategies for building business

- Optimization of air conditioning load
- Optimization of standard lighting illuminance
- Adoption of other energy saving items



Tamachi M-SQUARE Garden (to be certified as ZEB Ready)

In addition to the introduction of LED lighting and motion sensors, high-efficiency outdoor units have been installed and lighting intensity has been optimized in the private areas. An exterior design that contributes to reducing the load on the perimeter zone has also been adopted to achieve high environmental performance.

Key strategies for commercial facility business

- Optimization of air conditioning load
- Improve lighting efficiency
- Adoption of other energy-saving items
- Installation of solar power generator



"Kadoma-shi Matsuo-cho Commercial Facility Project" (tentative name)

A Building and Energy Management System (BEMS) and lighting and air conditioning control systems will be installed to achieve efficient energy operation and management. Other energy-saving features include the installation of solar panels on the rooftop space, cogeneration systems, highly insulated building materials, high-efficiency equipment, and LED lighting.

Key strategies for logistics business

- Installation of solar power generator
- Considering the adoption of LED lighting in warehouses with dimming



"Mitsui Fudosan Logistics Park Ebina I" (to be certified as ZEB)

The industry's first "Green energy warehouse" with virtually zero CO₂ emissions. Solar power generators are installed on the roof for on-site power generation and supply. We also provide green power supply services to support decarbonization of tenants.

Key strategies for hotel business

- Optimization of air conditioning load
- Improve lighting efficiency
- Installation of solar power generator

Mitsui Garden Hotel Jingugaien (Improve air conditioning efficiency by adopting balconies that block sunlight)





Achieve by FY2030: ZEH-M in all mid- and high-rise units ZEH in all detached units

Mita Garden Hills

(All units are ZEH-Oriented condominiums)

- Plans to acquire ZEH-Oriented certification for all 1,002 units, the largest scale in Japan.
- Service is introduced that virtually eliminates CO_2 emissions for both electricity and gas used.
- On-site power generation and MEMS further reduce the environmental impact of common areas
- Create a system that enables residents to enjoy and continuously work on energy conservation and CO₂ reduction, such as by visualizing the amount of electricity consumed in each condominium.



Achieve by FY2030 for orders received:
100% ZEH in exclusive housing
50% ZEH/ZEB in rental
housing/business buildings

Custom built house Proposal of environmental design including garden together with ZEH



Existing properties

We will improve energy efficiency through strategic renovation of properties and actively promote the creation of on site renewable energy.

In office buildings, promote the use of LED lighting and the optimization of lighting intensity in all properties, while making efforts to reduce the air conditioning load in hotels and commercial facilities.





Improve the environmental performance of existing facilities through strategic renovation

Promote the use of LED lighting in all office buildings

In logistics and commercial facilities, maximize the installation of solar power generators on rooftops and other premises.

Realize on-site power generation and supply.



Mitsui Fudosan Logistics Park Hino



Mitsui Outlet Park Kisarazu



Promote continuous renewal to improve energy-saving performance in other businesses

Action Plan 2 Greening of power consumption in common areas of properties and areas used by the company

By FY2030, achieve greening of power consumption in common areas of properties owned and areas used by the Group nationwide*

*Electricity equivalent to our share of common areas (including partially owned, excluding electricity equivalent to in-house power generation within each facility). The term "greening" refers to the switching of electricity used to substantially renewable energy sources by using non-fossil certificates, etc.

- By FY2022, we will start with the greening of power consumption used in 25 buildings in the Tokyo metropolitan area, including mixed-use core buildings in Tokyo Midtown and Nihonbashi area.
- In March 2022, we started collaborating on the greening of power consumption in the Chubu and Kansai regions. The Chubu and Kansai regions have been added to Mitsui Fudosan's "Green Electricity" expansion in the Tokyo metropolitan area, making it possible to expand into the three major metropolitan areas.
- Development in the three major metropolitan areas largely completes the support system for customers to solve issues related to RE100 and ESG. The move will apply to approx.180 facilities and accelerate the rollout of power greening to all facilities owned in Japan by 2030.



- *1: Solar power plants owned by Mitsui Fudosan, post-FIT power plants contracted by TEPCO Energy Partner, Inc., residential solar power generators, solar power owned by partner power producers, etc.
- *2: For FIT power sources, acquired via Japan Wholesale Power Exchange (JPEX); for non-FIT power sources, acquired from electric power providers.
- *3: Mitsuifudosan TG Smart Energy Co., Ltd. in the specified electricity business areas; TEPCO Energy Partner, Inc., etc. in other areas.



Greening of electricity used in common areas of properties owned by Mitsui Fudosan,including Tokyo Dome

Support tenant companies and buyers in their efforts to decarbonize by proposing Green Menu

Tenant companies

• Propose green power supply services to support corporate tenants' efforts toward RE100 and decarbonization.



Twenty companies have already introduced green power supply services

Institutional investors

• Support institutional investors in their RE100 and decarbonization efforts by proposing a green power menu at the time of property sale.

RE100 is led by The Climate Group in partnership with CDP, and also operates as part of the We Mean Business coalition. In Japan, the Japan Climate Leaders Partnership (JCLP) has been an official regional partner of RE100 since 2017, supporting the participation and activities of Japanese companies.



THE °CLIMATE GROUP

Home buyers

• Achieve a 40% reduction in CO₂ emissions (average for medium-and high-rise buildings and detached houses) by FY2030 by adopting methods such as the "bulk high-voltage power receiving × renewable energy" system and greening through the introduction of ENE-FARM in medium-and high-rise sales.

Further promotion of mega-solar development

New mega-solar development

• In addition to the existing mega-solar project (80 million kWh/year), aim to develop mega-solar power plants with a total power generation capacity of 300 million kWh/year *(Total output: Approx. 175,000 kW) by FY2030. (Total: 380 million kWh/year)



*Power generation equivalent to our own power use in the Tokyo metropolitan area at present (equivalent to the use of approx. 30 buildings in the common area of Tokyo Midtown Hibiya)

Existing mega-solar business

• Expand mega-solar projects with a total area of 93.9 ha at five locations nationwide. Total output: Approx. 72,000 kW, generating approx. 80 million kWh per year.



Tomakomai Solar Power Station



Hachinohe Solar Power Station



Sanyo Onoda Solar Power Station





Oita Solar Power Station

Omuta Solar Power Station

Action Plan 5 Initiatives to reduce CO₂ emissions during construction

In addition to the development of tools to accurately grasp CO₂ emissions during construction, require submission of a reduction plan by construction companies, etc. Promote reduction of CO₂ emissions in the entire supply chain

Accurate understanding of CO2 emissions during construction

- In March 2022, Mitsui Fudosan and Nikken Sekkei formulated the "Manual for Calculating Greenhouse Gas (GHG) Emissions," an arrangement of the Architectural Institute of Japan's "LCA Guidelines for Buildings*1" making its use easier in practical terms.
- The new method is a simple method of multiplying the "total construction work amount" by a certain unit price, enables highly accurate GHG emissions calculation by using an upward stacking formula for each material.
- We will proceed with the trial of this manual, and widely share it with related parties such as academic societies, construction companies, and real estate companies in the future. We will contribute to the realization of a decarbonized society through open innovation in the construction and real estate industries
- *1: LCA guidelines for buildings: Established in 2013 by the Architectural Institute of Japan (AIJ) and is the only academically established guideline in Japan for calculating the life cycle environmental impact (LCA*2) of buildings.

100%

*2: LCA (Life Cycle Assessment): A method for quantitatively assessing the environmental impact of a product or service over its life cycle.





Conceptual Illustration of Emissions Calculation Using the LCA Guidelines

Table of Contents image of the manual

Reduction of emissions during construction

- Revision of design guidelines
 - •Design to enhance environmental performance
 - •Proper planning on the use of components and equipment without waste
 - •Use of low-carbon materials and means
 - -Submission of "CO2 reduction plan during construction" including the above
- Revision of estimate guidelines
 - •Calculation of emissions during construction using the tools on the left
 - •Reduction of emissions at construction sites
 - •Procurement strategy for materials
 - -Submission of "CO $_2$ reduction plan during construction" including the above

Utilization of forests

- Actively utilize owned forests for high-rise wooden buildings and houses.
- Realize self-sufficiency in building materials and a sustainable virtuous cycle between forest resources and the local economy

Forest area Approx. 5,000 ha 700 We own and manage approx. 5,000 hectares of forests that span 31 1,000 1,100 municipalities, mainly in the northern Equivalent to approx. 1,063 Tokyo Domes * Hokkaido region. ssuming Tokyo Do Amount of CO₂ absorbed and fixed by the forests owned by Mitsui Fudosan 1,500 3,000 4,500 6,000 Group Approx. 7.500 9.000 10,500 12.000 **17,251** t-CO₂/year CO2 * The annual amount of CO2 absorbed and 13,500 15,000 16,500 17,251 fixed by the Group's forests is calculated using Hokkaido's formula based on forest growth data from the FY2020 Forest Survey Report.

Forest conservation activities of Mitsui Fudosan Group

Mitsui Home's Sustainable Wooden Condominium "MOCXION" for a Decarbonized Society

- Wood, a sustainable building material is used to construct the condominiums significantly reducing CO₂ emissions during construction and contributes to the global environment
- Sustainable condominiums with high thermal insulation, energy efficiency, durability, earthquake resistance, fire resistance and sound insulation



MOCXION INAGI has developed and adopted Japan's highest level of high-strength load-bearing wall "MOCXwall" (wall ratio over 30 times), which is composed of a combination of commonly available materials, centered on the two-by-four construction method.

Plans for the largest and tallest wooden rental office building in Japan in Nihonbashi, Tokyo

- The largest and tallest existing wooden high-rise building in Japan, with 17 floors above ground, a height of 70 m, and a total floor area of approx. 26,000m²
- Lumber volume used for structural materials is expected to exceed 1,000 m³, the largest in Japan
- Actively utilize timber from forests owned by the Mitsui Fudosan Group in Hokkaido. The goal is to achieve self-sufficiency in building materials and a sustainable virtuous cycle between forest resources and the local economy.



Acquisition of external certifications

• In addition to improving the environmental performance of all facilities, we will actively acquire external certifications in Japan and overseas to promote ESG, including decarbonization.



Refer to the ESG data page and environment-related data for the status of environmental real estate certifications

Examples of Specific Initiatives The Creation of neighborhoods initiatives

Kashiwanoha Area Energy Management System (AEMS)

AEMS has been installed to centrally manage the energy of the entire area. Efficient use of energy has been achieved, and some energy savings have been achieved using solar panels.



Also promoting new initiatives that utilize area venues and communities

Demonstration fields for new technologies

Providing a demonstration field to venture companies with new decarbonization technologies, such as Girasol Energy Inc. and Exergy Power Systems Inc.



Solar panels on the roof of LaLaport Kashiwanoha

Environmental activities participated in by local residents

Develop a participatory environmental platform involving local residents and users in the area. Those who participate in the activities will be able to receive points and privileges.



Expand environmental activities with local residents

Energy conservation promotion initiative in the area

Smart Energy Project (Nihonbashi/Toyosu/Yaesu)

Through the stable supply of electricity and heat to the surrounding area, including existing buildings, we have realized eco-friendly neighborhoods development that improves energy resilience* and achieved energy conservation and CO₂ reduction, even in times of emergency. Following Nihonbashi and Toyosu, energy supply is scheduled to start in Yaesu in September 2022.





Cogeneration system



Central monitoring room for area energy management

*Energy resilience Enhance resilience of energy supply networks. This is based on the concept that it is important to be prepared not only for emergencies, but also for a variety of situations during normal times.

Internal Systems for Promoting Action Plans

Introduction of Internal Carbon Pricing (ICP) System

• From FY2022, we will introduce the Internal Carbon Pricing System, a mechanism to encourage decarbonization efforts by pricing CO₂ emissions in newly developed properties. Environmental impact is quantified and visualized to manage progress. Raising awareness within the company to reduce CO₂ emissions and accelerate efforts to decarbonize.

Structure for promoting Action Plans

• Newly established "Sustainability Promotion Division" to accelerate efforts related to ESG and SDGs. The "Sustainability Promotion Department" was established in October last year with responsibility for overall functions related to ESG and SDGs, including promotion of action plans, and the "Environment & Energy Business Department" responsible for green energy management and mega solar business, will promote initiatives in cooperation with company-wide divisions.

