


# **Group Action Plan to Realize Decarbonized Society**

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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.

## Philosophy of “&” logo



The Mitsui Fudosan Group is committed to social and economic development as well as global environmental preservation under the principles of “Coexist in Harmony with Society,” “Link Diverse Values,” and “Achieve Sustainable Society.”

## Principle of “&EARTH”



Recognizing the need to create neighborhoods that remain in tune with global environmental concerns, we aim to help establishing a society that enriches both people and the planet.

## Group Long-term Management Policy "VISION 2025"

### ◀ VISION 2025 ▶

- The goal is to “Successfully establish a sustainable society through the creation of neighborhoods”
- Established “Six Priority Goals” to be addressed in ESG Management.

Establish ultra-smart societies by creating neighborhoods

Achieve health, safety and security in people’s daily lives




Create new industries through open innovation

Achieve a society where a diverse workforce can thrive

Reduce environmental impact and generate energy

Continuously improve compliance and governance

## Participation in climate change initiatives

<p>Reduction of GHG emissions</p> <p>SBTi certification</p>  <p>DRIVING AMBITIOUS CORPORATE CLIMATE ACTION</p>	<p>Renewable energy ratio of electricity in business activities (RE100)</p> <p>100% by FY2050</p>  <p>THE CLIMATE GROUP   CDP</p>	<p>Task Force on Climate-related Financial Disclosures (TCFD)</p> <p>Disclosure of financial impact in December 2020</p>  <p>TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES</p>
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## New target setting

### Mitsui Fudosan Group's New Targets

**40% reduction in Group's GHG emissions by FY2030 (vs. FY2019)**  
**Net Zero by FY2050**

\* SCOPE 1 + SCOPE 2: 46.2% reduction by FY2030 (vs. FY2019)

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

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

**Action Plan 1**  
Improve environmental performance of new and existing properties

**Action Plan 2**  
Greening of electricity in common areas of properties and areas used by the company

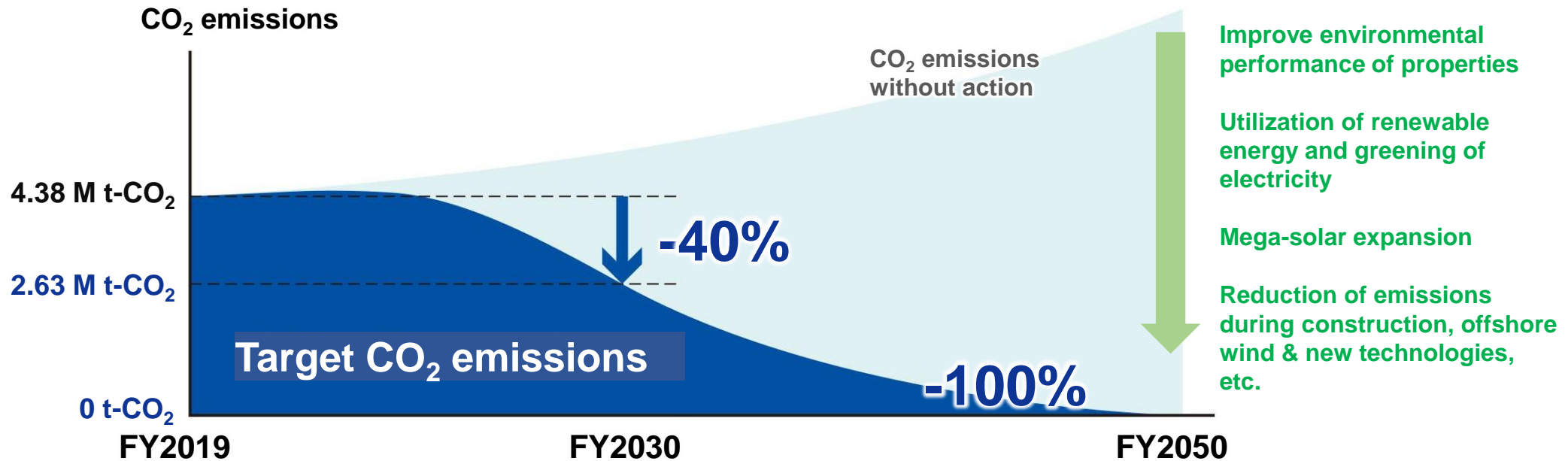
**Action Plan 3**  
Provide Green Menu to tenants and buyers

**Action Plan 4**  
Secure stable renewable energy sources

**Action Plan 5**  
Initiatives to reduce CO<sub>2</sub> emissions during construction

**Other Key Initiatives**

- Utilization of forests
- Acquisition of external certifications
- Open innovation
- The creation of Neighborhoods initiatives
- Improvement of internal systems



Toward FY2030  
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Looking Ahead to FY2050  
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Internal Systems for Promoting Action Plans  
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## Action Plan 1 Improve environmental performance of new and existing properties

### New properties

## Realize ZEB/ZEH level environmental performance for all 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.

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

## Action Plan 1 Improve environmental performance of new and existing properties

### New properties

## Realize ZEB/ZEH level\* environmental performance for all properties

#### 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 CO<sub>2</sub> 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)



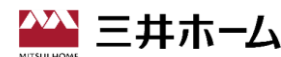
- Achieve by FY2030:  
**ZEH-M in all mid- and high-rise units**  
**ZEH in all detached units**



Eifuku 4-chome Project  
(ZEH, Nearly ZEH: Fine Court)



LaLa NAGOYA minato AQUUS  
Garden Square  
(ZEH-M Oriented Park Homes)



- 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

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

## Action Plan 1 Improve environmental performance of new and existing properties

### 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



Mitsui Outlet Park Shiga Ryuo



Mitsui Outlet Park Kisarazu

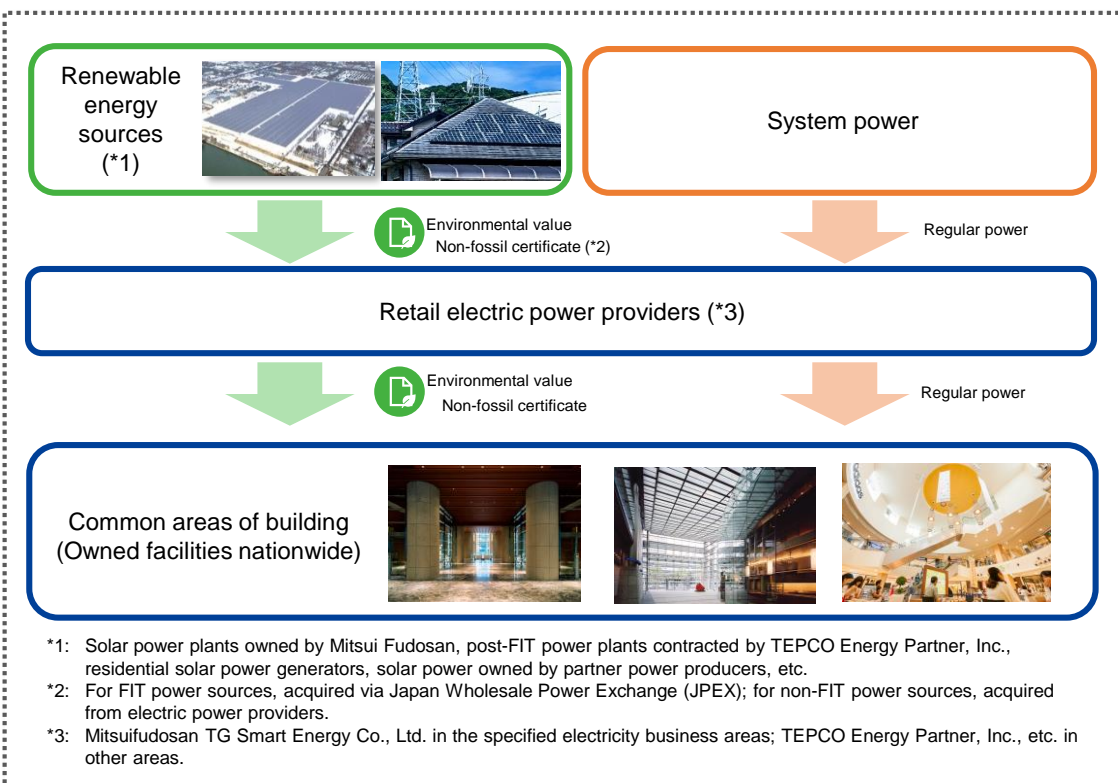
**Promote continuous renewal to improve energy-saving performance in other businesses**



## 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\***

- 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.
- By FY2030, realize the greening of power consumption used at all our facilities nationwide.



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

\* 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.

## Action Plan 3 Provide Green Menu to tenants and buyers

### 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.



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(abc order)

In April 2021, we will start "green power supply services" for office building tenants.

Currently, about 100 companies are using or considering this service.

\* (Some of companies using the system as of October 31, 2021)

#### 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.

#### Home buyers

- Achieve a 40% reduction in CO<sub>2</sub> 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.

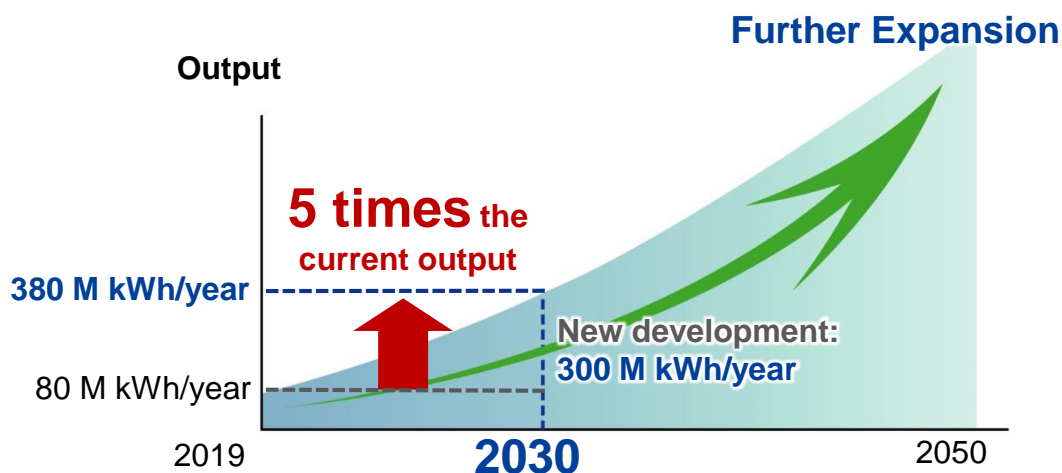
## Action Plan 4 Secure stable renewable energy sources

### Stable procurement of non-fossil certificates in addition to 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)



#### Stable procurement of non-fossil certificates

- In the Tokyo metropolitan area, in addition to the procurement of 600 million kWh/year from TEPCO Energy Partner, Inc., with which we have concluded a comprehensive agreement, secure a total of 800 million kWh/year or more of non-fossil certificates through comprehensive agreements with other companies.
- Strive to secure additional non-fossil certificates throughout Japan outside the Tokyo metropolitan area as necessary.

#### 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 CO<sub>2</sub> emissions during construction

**In addition to the development of tools to accurately grasp CO<sub>2</sub> emissions during construction, require submission of a reduction plan by construction companies, etc. Promote reduction of CO<sub>2</sub> emissions in the entire supply chain**

### Accurate understanding of CO<sub>2</sub> emissions during construction

- In order to accurately grasp the amount of emissions at the time of construction and appropriately reflect the reduction effects, etc., introduce a mechanism for calculating the amount of emissions during construction based on the “Method of accumulating actual results of materials used(tentative name) .”
- Develop "tools for calculating emissions during construction" by the end of FY2022 in collaboration with academic experts and design engineers.
- By the end of FY2023, require all builders to calculate "CO<sub>2</sub> emissions during construction" using the above tools.

### 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 "CO<sub>2</sub> 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<sub>2</sub> reduction plan during construction" including the above

\* Method of accumulating actual results of materials used (tentative name)

A method of calculating building emissions for the entire building by accumulating emissions for each material using the CO<sub>2</sub> intensity specific to the material used. In the past, the calculation method of CO<sub>2</sub> emissions at the time of construction was used by multiplying the construction cost (capital investment) by the emission intensity. However, there have been problems such as the introduction of low-carbon materials and the inability to properly reflect the CO<sub>2</sub> emission reduction effects of energy-saving activities at construction sites.

## Utilization of forests

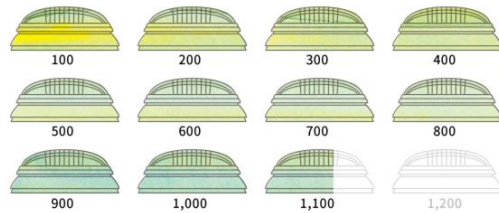
- Actively utilize owned forests for high-rise wooden buildings and houses.
- Realize self-sufficiency in building materials and a sustainable virtuous cycle between forest resources and the local economy

### Forest conservation activities of Mitsui Fudosan Group

Forest area

Approx.  
**5,000** ha

We own and manage approx. 5,000 hectares of forests that span 31 municipalities, mainly in the northern Hokkaido region.



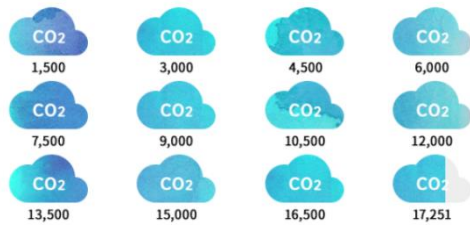
Equivalent to approx. 1,063 Tokyo Domes \*  
Calculated assuming Tokyo Dome=4.7 ha

Amount of CO<sub>2</sub> absorbed and fixed by the forests owned by Mitsui Fudosan Group

Approx.

**17,251** t-CO<sub>2</sub>/year

\* The annual amount of CO<sub>2</sub> absorbed and fixed by the Group's forests is calculated using Hokkaido's formula based on forest growth data from the FY2020 Forest Survey Report.



### Utilization of thinned wood



Balcony ceiling and floor materials (Kashiwa-no-ha Smart City Gate Square)



Children's playground equipment (LaLaport Ebina Wood Cube)



Various novelties

## 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.

### Examples of certified facilities

<p>ZEB/ZEH(BELS)</p>	<p>DBJ Green Building 2020 CASBEE</p>	<p>LEED</p>
<p>Mitsui Fudosan Logistics Park Funabashi III (ZEB-Ready)</p>	<p>Tokyo Midtown Hibiya (Simultaneous acquisition of DBJ Green Building Certification and CASBEE Wellness Office Certification)</p>	<p>Kashiwa-no-ha Smart City is the first city in Japan to receive the highest rank of platinum certification under LEED-ND (Leadership in Energy and Environmental Design for Neighborhoods Development), an international environmental certification system.</p>
<p>Park Homes LaLa NAGOYA minato AQUUS Garden Square (ZEH-M Oriented)</p>		

## Looking ahead to FY2050, we shall continue to evolve each Action Plan and address the following

### Open innovation for the creation of new technologies

- Identify and proactively utilize trends in a wide range of innovations in decarbonization technology.
- Aim to contribute to the decarbonization of society as a whole through joint research with academia and construction companies, and by actively investing in venture companies and providing them with opportunities for demonstration tests.

#### < Examples of Specific Initiatives >

##### Utilization for the creation of renewable energy

- Aim to further procure renewable energy through the use of new technologies such as offshore wind power and geothermal power generations.

##### Utilization for reduction of CO<sub>2</sub> emissions during construction and building operation

- Continue industry-leading initiatives involving construction companies and component manufacturers, aiming to reduce CO<sub>2</sub> emissions throughout the supply chain.
- By actively adopting new technologies and materials that contribute to energy-saving in buildings, aim to reduce CO<sub>2</sub> emissions during building operation by the Group.

### Promotion of the creation of neighborhoods initiatives

- With the aim of realizing a decarbonized society, utilizing new technologies and open innovation, such as the Smart Energy Project in Nihonbashi, Toyosu, and Yaesu, and Kashiwanoha AEMS, aim to realize the creation of neighborhoods that promotes decarbonization not only of facilities owned but also of the entire area.



Joint research with the University of Tokyo “Mitsui Fudosan UTokyo Lab”  
 \* At the press conference on the conclusion of agreement on industry-academia collaboration in July 2020



Bottom-mounted offshore wind turbines (image)



Kashiwanoha Smart Center

## 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.

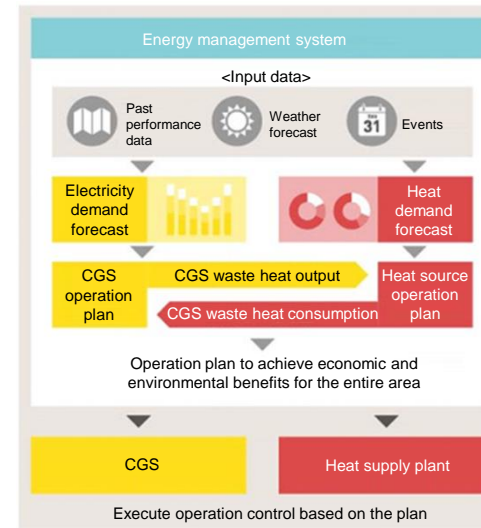


Expand environmental activities with local residents

## 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 CO<sub>2</sub> reduction, even in times of emergency.



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.

## 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 CO<sub>2</sub> emissions in newly developed properties. Environmental impact is quantified and visualized to manage progress. Raising awareness within the company to reduce CO<sub>2</sub> emissions and accelerate efforts to decarbonize.

## Structure for promoting Action Plans

- Establish Sustainability Promotion Dept. as an overall function of Action Plans  
“Each business HQ, division, and Group company” will collaborate with the Environment & Energy Service Dept., engaged in company-wide energy management, and all other divisions to promote decarbonization initiatives.

