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Mitsui Fudosan Co., Ltd. TEPCO Energy Partner, Incorporated

# Mitsui Fudosan and TEPCO Energy Partner Begin Construction for their First Collaborative Project, the Nihonbashi 1-chome Smart Energy Project —Stable Supply of Electricity and Heat to the Surrounding Area of Approximately 500,000 m<sup>2</sup>, including Existing Buildings—

Tokyo, Japan, April 2, 2024 – Mitsui Fudosan Co., Ltd., a leading global real estate company headquartered in Tokyo, announced today that Mitsui Fudosan TEPCO Energy Co., Ltd. ("Mitsui Fudosan TEPCO Energy"), jointly established in April 2023 with TEPCO Energy Partner, Incorporated ("TEPCO"), has started construction from April 1, 2024 on a project to introduce an independent distributed energy center in the Nihonbashi 1-Chome Central District Category 1 Urban Redevelopment Project ("the Nihonbashi 1-Chome Central District Redevelopment Project") to supply electricity and heat to the surrounding area ("the Project"). The Project is scheduled for completion in March 2026.

# **Overview of the Project**

- (1) Improves added value in the Nihonbashi 1-chome area
  - Contributes to the development of a city that is highly competitive internationally by building an independent distributed energy hub
  - Supplies energy to the entire area, including the existing Nihonbashi 1-chome Mitsui Building and the Nihonbashi Nomura Building, a tangible cultural property designated by Chuo Ward, in addition to newly redeveloped buildings
- (2) Improves disaster preparedness for the entire district
- Provides ongoing energy supply during wide-area power outages by adopting a large-scale CGS<sup>\*1</sup> utilizing city gas as an independent distributed power source
- (3) <u>Contributes to reduced energy usage and CO<sub>2</sub> emissions through local production for local consumption and an energy management system that uses AI</u>
  - Achieves approximately 25% CO<sub>2</sub> emissions reduction<sup>\*2</sup> through the use of waste heat from CGS power generation for district heating and cooling, combined with energy management implementing AI that is capable of quick and highly efficient operation planning
- (4) The first Smart Energy Project by Mitsui Fudosan and TEPCO
- Mitsui Fudosan TEPCO Energy was jointly established in April 2023. Construction began in April 2024, and energy supply will start in FY2026
- \*1 Abbreviation for co-generation system, a system that generates electricity and heat on-site using city gas and other fuels to supply energy with high overall efficiency
- \*2 Reduction compared to properties with separate electricity and heat supply facilities. CO<sub>2</sub> emissions can be reduced by receiving energy supplied by the energy center



<Supply area>

## Features of the Project

# (1) Improves added value in the Nihonbashi 1-chome area

The Project is an initiative to further improve the international competitiveness of Nihonbashi 1-chome by providing an independent distributed energy supply to the area which will enable the supply of electricity and heat in the event of a disaster and also achieve high environmental performance. The supply area will include not only new buildings of the Nihonbashi 1-Chome Central District Redevelopment Project, a large-scale mixed-use\*3 redevelopment project that includes MICE<sup>\*4</sup> and business support facilities in addition to includes offices and retail, but also the Nihonbashi Nomura Building, a tangible cultural property designated by Chuo Ward and preserved in the district, as well as existing facilities such as the Nihonbashi 1-chome Mitsui Building. By providing high BCP\*5 functionality for existing facilities, the Project will contribute to improving the disaster preparedness and environmental performance of the entire city. Future expansion of supply to neighboring districts is also being considered.

Mitsui Fudosan and TEPCO will continue to work on smart energy projects that are suited to the characteristics of the region and development of the city to promote safe and resilient urban development.

- \*3 "Mixed use" means to develop one building, city block or other site for several different uses, such as residences, stores, offices, and cultural facilities
- \*4 A general term that stands for Meetings (corporate meetings), Incentive travel (incentive/study trips offered by companies), Conventions (international conferences conducted by international organizations, etc.), and Exhibitions/Events
  - **Energy center** Powe nbashi 1-Chome Central District Urban Redevelopmen Cold Powe Hes Steam, hot water

\*5 Abbreviation for Business Continuity Plan

<Energy flow diagram> \*Subject to change

# (2) Improves disaster preparedness for the entire district

The project will use the facilities of existing buildings to provide a wide range of power supply, from low voltage to extra high voltage, and construct a multiple-line power reception system<sup>\*6</sup> to

ensure a highly reliable supply to the entire city, including existing buildings.

The large-scale CGS is fueled by city gas supplied from medium-pressure city gas pipelines with strong earthquake resistance and it is capable of supplying power during a power grid outage, as long as the medium-pressure city gas supply continues. In an emergency, the supplied area will also include public facilities for stranded people, which are the center of neighborhood disaster response facilities. This will improve the disaster preparedness of the entire district, including the neighboring areas.

\*6 In addition to the power systems from which electricity is received under normal circumstances, electricity can be received from another power system at the same time as a backup in the event of a power system failure

<Large-scale CGS> \*Image for reference purposes

# (3) Contributes to reduced energy usage and $CO_2$ emissions through local production for local consumption and an energy management system that uses AI

The CGS introduced as part of the Project is highly resilient, and reduces energy usage through its high energy efficiency (power generation efficiency of 48.6%<sup>\*7</sup>, total energy efficiency including waste heat usage of 77.8%) compared to the average power generation efficiency of about 46%<sup>\*8</sup> for all power sources. Compared to owning separate facilities for electricity and heat supply, receiving energy supplied by the energy center will reduce CO<sub>2</sub> emissions by approximately 25%. In addition, an energy management system equipped with three different types of AI will be introduced. The system will enable operation planning 30 hours in advance for short periods of time (30-minute cycles) by choosing from among countless operation patterns according to the purpose, which will achieve further energy savings through highly efficient operation of heat source facilities. It will standardize the management of energy centers that must make comprehensive decisions based on various parameters, such as demand response that requires immediate action, and will enable sustainable energy center operations even as it is becoming increasingly difficult to secure expert engineers.



<Energy management system conceptual diagram>

\*7 Based on the manufacturer catalogue figure

\*8 Based on the power primary energy conversion factor according to the Act on the Rational Use of Energy

# (4) The first Smart Energy Project by Mitsui Fudosan and TEPCO

Mitsui Fudosan and TEPCO have been collaborating since FY2021 on green power provision services for Mitsui Fudosan and its tenants, with the aim of realizing a decarbonized society. In April 2023, Mitsui Fudosan and TEPCO jointly established Mitsui Fudosan TEPCO Energy, which recently started construction of the Smart Energy Project. The two companies will work together through Mitsui Fudosan TEPCO Energy to improve disaster preparedness and environmental performance in city center.



<Image of green power provision service>

# Overview of Energy Center

Start of construction	April 1, 2024
Scheduled start of supply	April 2026
Installation location	Inside buildings of the Nihonbashi 1-Chome Central District Category 1
	Urban Redevelopment Project
Energy supplied area	Approx. 409,028.6 ft <sup>2</sup> (approx. 38,000 m <sup>2</sup> )
Energy supplied area total floor area	Approx. 5,145,149.2 ft <sup>2</sup> (approx. 478,000 m <sup>2</sup> )

This project will attempt to transform the area into an environmentally friendly, disaster resilient neighborhood. To do so, Mitsui Fudosan TEPCO Energy has established an energy center with CGS as its core and will supply locally produced, locally consumed electricity and heat. In this manner, the project will contribute to the achievement of the SDGs, which seek to realize a sustainable society by ensuring safe and secure cities and reducing environmental impact.

■ Mitsui Fudosan Group's Contribution to the SDGs https://www.mitsuifudosan.co.jp/english/esg csr/

The Mitsui Fudosan Group aims for a society that enriches both people and the planet under the principles of coexist in harmony with society, link diverse values and achieve a sustainable society, and advances business with an awareness of the environment (E), society (S) and governance (G), thus promoting ESG management. By further accelerating its ESG management, the Group will realize Society 5.0, which the Japanese government has been advocating, and contribute significantly to achieving the SDGs. Additionally, the Group formulated the following Group guidelines related to "Realize a Decarbonized Society" and "Diversity & Inclusion Promotion" in November 2021, and "Biodiversity" in March 2023. The Mitsui Fudosan Group will continue to work toward solving social issues through neighborhood creation.

[References]

Group Action Plan to Realize a Decarbonized Society
<u>https://www.mitsuifudosan.co.jp/english/corporate/news/2021/1124/</u>
Formulated Diversity and Inclusion Promotion Declaration and Initiatives Policy
<u>https://www.mitsuifudosan.co.jp/english/corporate/news/2021/1129\_02/</u>
Establishes Mitsui Fudosan Group Biodiversity Policy
<u>https://www.mitsuifudosan.co.jp/english/corporate/news/2023/0413/</u>

## TEPCO's contribution to the realization of a carbon neutral society

The TEPCO Group is working to reduce  $CO_2$  emissions from electricity sold to customers by 50% in FY2030 compared to FY2013 and achieve net zero  $CO_2$  emissions from energy supply in 2050. TEPCO will contribute to the realization of carbon neutrality with its customers by providing a wide variety of renewable energy options to solve various issues that customers face in using renewable energy, such as compliance with various systems and securing a stable power supply.

\*The initiatives covered in this press release are contributing to the five goals of the UN's SDGs

- Goal 7 Affordable and Clean Energy
- Goal 9 Industry, Innovation and Infrastructure
- Goal 11 Sustainable Cities and Communities
- Goal 12 Responsible Consumption and Production
- Goal 13 Climate Action



SUSTAINABLE

DEVELOPMENT