## 4. Initiatives to Achieve a Sustainable Society

The complex engages in measures to reduce its environmental impact with its sights set on helping to achieve a sustainable society. In part, this entails gaining various external certifications related to the environment and actively adopting renewable energy sources with low impact on the global environment.

# Obtained ZEB Oriented (retail, other) through evaluation based on BELS (Building-Housing Energy-Efficiency Labeling System)

At this complex, as part of a plan to promote carbon neutral design, Mitsui Fudosan reduced the amount of its design primary energy consumption by 30% or more, enabling it to obtain ZEB Certification (retail, other) through an evaluation based on BELS.

ZEB Certification enlists a certification system applicable to buildings with a total floor area of 10,000 m<sup>2</sup> (approximately 107,639 ft<sup>2</sup>) for which actions are taken to achieve greater energy conservation, in addition to making use of high-performance building envelopes and high-efficiency energy-saving equipment. This complex is classified as a department store under criteria for granting ZEB Certification, defined as achieving reduction of primary energy consumption amounting to 30% or more with respect to facilities such as hotels, hospitals, department stores and meeting places.

The scope of the complex's ZEB Oriented Certification covers "merchandise sales, etc.," which excludes the floor area occupied by its eating and drinking establishments from the total floor area of the commercial building.



### **DBJ Green Building Certification**

The complex has obtained the highest rating of five stars under the DBJ Green Building Certification program, which assesses environmental and social awareness from a perspective grounded in ESG.

The DBJ Green Building Certification serves as a program for certifying properties that evince environmental and social awareness. Administered by the Development Bank of Japan (DBJ) and the Japan Real Estate Institute (JREI), and the certification scheme consists of five levels of certification ranging from one to five stars. It enlists assessment parameters that include overall environmental performance, diversity and local environmental awareness, and stakeholder collaboration.



### On-site energy generation through installation of solar panels

Approx. 4,500 solar panels will be installed on building rooftops and on the walls of the multistory parking building to generate energy on-site. These are expected to provide a daily average of 5,207 kWh of electricity, which will be used to power the complex's common areas. The number of solar panels installed and amount of electricity generated at the complex will make it one of the largest amounts of solar panels for Mitsui Fudosan facilities.

In addition, in Kusunoki Plaza at the 1F northwest entrance, three solar-powered energy storage streetlights have been installed, with power generated by the solar panels used for lighting during normal times and for charging cell phones during emergencies.

Some of the solar power generation on retail building rooftops can be seen from the rooftop Square in the Sky, allowing visitors to experience clean energy creation close at hand.



Scenes of the solar panels viewed from the rooftop Square in the Sky



Multi-story parking building Computer generated image of solar panels installed in a wall (areas with a red border are solar panel installations)

### **Initiatives related to Energy Saving**

By implementing the following initiatives at this complex, Mitsui Fudosan will contribute to the realization of a sustainable society.

<Initiative Details>

- 1. Energy management is implemented using a BEMS (energy management system) and initiatives undertaken on both hardware and software to minimize the environmental impact of the large retail complex that requires a lot of energy.
- 2. In mall spaces, an LED dimming system is employed to control the brightness of light. By changing brightness in accordance with the change from daytime to nighttime, it holds down lighting energy waste.
- 3. A co-generation system is employed, with the plan to provide heat for air conditioning and electricity used to power entire buildings.
- 4. Air conditioning load is reduced by controlling the amount of outside air introduced in response to the number of people in the building.

### Introduction of Pre-bookable EV Charging Service Using Renewable Energy

The complex will have six pre-bookable EV charging units from PLUGO Inc. installed on the multistory parking building. Those using the service will be able to check availability, arrange reservations and make payments through the dedicated My PLUGO mobile device app, thereby ensuring a reliable and smooth charging experience.

The Green Charging® service is fully powered by renewable energy sources. The environmental value of electricity from renewable energy producers acquired by the company is allocated to the complex's charging station, based on the volume of energy consumed. This contributes to the realization of a decarbonized society.





Reference: "PLUGO BAR" made by PLUGO

### **Initiatives to Reduce Environmental Impact**

The complex promotes efforts to reduce impact on the environment by extending the service life of equipment and efficient use of water resources, including the initiatives below.

< Details of the initiatives >

- COOL Distribution Board, a heat-resistant distribution board that uses radiative sky cooling material, is adopted for the first time in Japan. This product is expected to prevent deterioration and breakdown of equipment inside the board due to heat, contributing to the reliability and longevity of the distribution board.
- Reducing use of city water by using industrial water for toilet flushing and exterior irrigation.

# Three Key Points of the COOL Distribution Board Prolongs service life Prevents heat damage inside devices and reduces maintenance costs Reduces electricity use Reduces cooling equipment maintenance and costs Saves space Cooling equipment space is unnecessary, saving space on the board

### **Outdoor landscaping**

Greenery will occupy approx. 107,600 ft<sup>2</sup> (approx. 10,000 m<sup>2</sup>) of plazas, walkways and rooftop plazas surrounding the complex. Part of the multistory parking building will also have a green wall. Incorporating abundant greenery provides a peaceful, environmentally harmonious shopping space.

### Heat countermeasures

The complex has been certified by the Osaka Prefectural Government as heat countermeasure project using urban greening. Traffic plazas within the complex have heat-shielding roofs, and tall trees have been planted around bus stops to provide shade and greenery. This initiative promotes improvements in the heat environment and contributes to heat island countermeasures.