

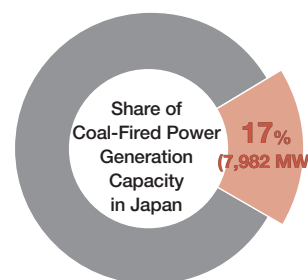
# Thermal Power Business

Providing an economical and stable baseload source of electricity, the J-POWER Group's coal-fired thermal power plants maintain high load factors and consistently clear strict standards limiting emissions of environmentally harmful substances, such as SOx and NOx.

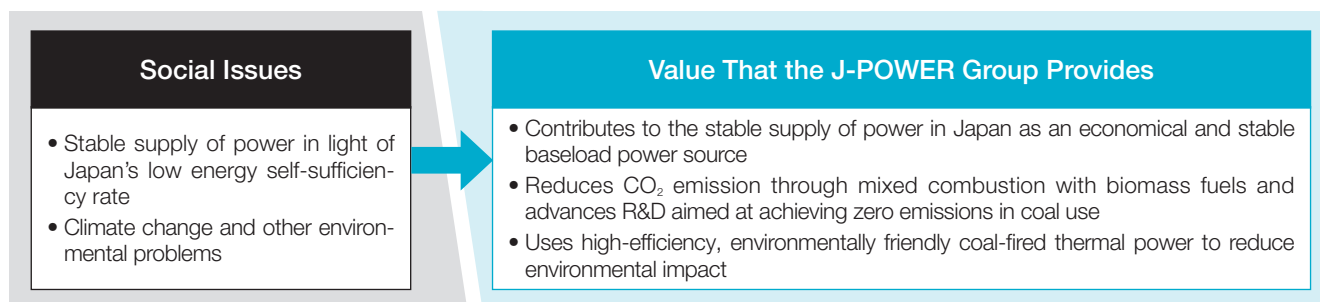
We see reducing CO<sub>2</sub> emissions from coal use as a materiality for management. Since launching initiatives related to the mixed combustion of biomass fuels in coal-fired thermal power generation in 2003, we have contributed to the reduction of CO<sub>2</sub> emissions. Going forward, we will reinforce larger-scale mixed combustion initiatives. Furthermore, we are pursuing research and development aimed at realizing zero emissions from coal use.

While taking steps to address climate change and other environmental problems, the Company will continue to utilize economical and stable coal, thereby contributing to the stable supply of electricity in Japan.

Note: For details on initiatives to achieve zero emissions from fossil fuel power generation, please refer to pages 26–29.



Sources: Compiled from Surveys and Statistics of Electricity (Agency for Natural Resources and Energy)  
Note: Owned capacity basis, as of March 31, 2020



## Replacement and New Capacity Projects

The Takehara Thermal Power Plant New Unit No. 1 began operation in June 2020. This cutting-edge coal-fired thermal power plant replaced the old No. 1 and No. 2 units at the same 600 MW capacity. The new plant achieves thermal efficiency of approximately 48%, an improvement from the approximately 41% and 38% of the former No. 1 and No. 2 units, respectively.\* As a result, CO<sub>2</sub> emissions per unit of power generated have been reduced by approximately 20%. In addition, by aiming for a mixed combustion rate of 10% biomass fuels, we will reduce the amount of coal the plant uses, further cutting net carbon emissions.

In addition, the Kashima Power Co., Ltd. Kashima Thermal Power Plant Unit No. 2, in which J-POWER holds a 50% stake, commenced operation in July 2020. The electricity generated by

the unit is being purchased for resale by NIPPON STEEL CORPORATION and J-POWER in proportion to their equity stakes.

The power generated by these two high-efficiency, highly competitive, cutting-edge thermal power plants will be sold broadly to the former EPCOs and on electricity markets, contributing to revenue expansion.

Regarding the Yamaguchi Ube Power project, in April 2019, we announced that we are considering scaling down the project to a single 600 MW-class ultra-supercritical plant or altering the plan to develop a commercial oxygen-blown IGCC plant. We will advance considerations to formulate a power station plan best suited to the conditions of this project.

\* Generating end, lower heating values (LHV)

### Takehara Thermal Power Plant New Unit No. 1 (Replacement)

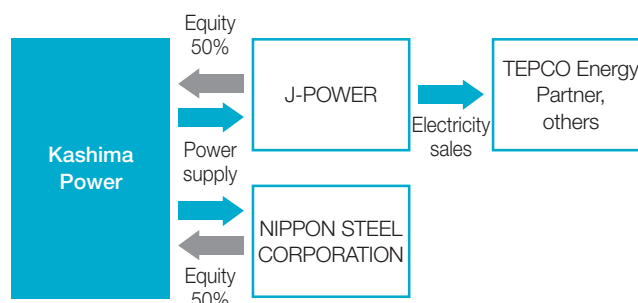
Location	Takehara City, Hiroshima Prefecture
Type	Coal-fired thermal power
Start of operations	June 2020
Capacity	600 MW → 600 MW (Replacement at the same capacity)
Steam conditions	Sub-critical → Ultra-supercritical (USC)



Takehara Thermal Power Plant New Unit No. 1

### Kashima Power Co., Ltd. Kashima Thermal Power Plant Unit No. 2

Location	Kashima City, Ibaraki Prefecture
Type	Coal-fired thermal power
Start of operations	July 2020
Capacity	645 MW (Owned capacity: 323 MW)
Steam conditions	Ultra-supercritical (USC)



### Yamaguchi Ube Power (New Capacity)

Location	Ube City, Yamaguchi Prefecture
Status	Changes in plan under review