

April 24th, 2024 City of Yokohama Port and Harbor Bureau

Signing of a MOU on the establishment of a green power supply base to meet the increasing demand for electricity in the Yokohama waterfront area and the realization of onshore power supply for cruise ships.

The City of Yokohama concluded a MOU with TEPCO Power Grid, Inc. and Ocean Power Grid, Inc. to consider the future conception of grid network and the construction of new supply base of green power, which are necessary for forming Carbon-Neutral Port in the Port of Yokohama.

We will examine the possibility of supplying the Port of Yokohama with green power derived from offshore wind power generation by battery tankers. We will also consider the construction of electric power supply facilities to cope with increased electricity demand in waterfront areas due to cruise ship onshore power supply, etc. and fluctuations in the balance of supply and demand of electric power.



From left: Ms. Ikuko SATO, Managing Executive Officer, TEPCO Power Grid, Inc.; Takeharu YAMANAKA, Mayor, City of Yokohama: Mr. Masahiro ITO, Representative Director of Ocean Power Grid, Inc. (at Yokohama City Hall)

1 Purpose of MOU

- (i) City of Yokohama: Promoting the Formation of a Carbon Neutral Port at the Port of Yokohama Realization of Japan's first onshore power supply to a large cruise ships and green power supply to the Yokohama waterfront area
- (ii) TEPCO Power Grid, Inc.: Stabilization of the balance between supply and demand of electricity in the Yokohama waterfront area Study on the development of an essential power supply base to cope with fluctuations in the balance of supply and demand of electricity in the Yokohama waterfront area.
- (iii) Ocean Power Grid, Inc.: Promote consideration of utilization of battery tankers Realization of the world's first transport of green power derived from offshore wind power generation by battery tankers



Image of the Electric Power Network Concept for Increased Electricity Demand in the Yokohama City Waterfront Area

2 Future Perspective for Electricity Demand in the Waterfront Area of Yokohama City *

In the Yokohama City waterfront area, the demand for electricity is expected to increase due to the development of the Minato Mirai 21 district, the redevelopment of the Yamashita Pier and the Shin-Honmoku Pier, etc. In addition, the balance of electricity supply and demand is expected to change with the progress of decarbonization, and the need for new supply bases to meet the future demand for electricity is increasing. (* Forecast by TEPCO Power Grid, Inc.)

3 Battery Tankers

Battery tankers are the world's first ways of transporting electricity by storing it in onboard storage batteries and transporting it by sea. Japan has set a goal of achieving carbon neutrality by 2050 and is promoting the introduction of renewable energies, particularly offshore wind power. Unlike conventional thermal power sources, in many cases, renewable energy sources with large installation potentials are located far away from the electricity demand areas. One of the challenges is to strengthen the means of transporting that power. Therefore, battery tankers are expected to have potential as a means of solving these issues.



Image of Battery Tanker

4 Offshore Wind Power

In March 2024, the Cabinet approved a draft amendment to "the Act on Promoting the Utilization of Sea Areas for the Development of Marine Renewable Energy Power Generation Facilities" that would expand the location of offshore wind power generation facilities to the exclusive economic zone (EEZ). Japan's EEZ is the sixth largest in the world, but only about 10% of the entire EEZ is less than 300 meters deep, an area where submarine power cables could be laid in Japan.

Battery tankers can transmit power regardless of water depth and are expected to be a means of power transmission that expands the potential of offshore wind power.

- 5 Introduction of each company
 - (i) TEPCO Power Grid, Inc.

A wholly owned subsidiary of TEPCO Holdings, Inc., General Electricity Transmission and Distribution Utility serving the Kanto area, all of Yamanashi Prefecture, and part of Shizuoka Prefecture. Kanagawa Prefecture is served by TEPCO Power Grid, Inc.

(ii) Ocean Power Grid, Inc.

X

A wholly owned subsidiary of Power X (established on February 9, 2024). Through the sale and operation of battery tankers, the company aims to create an offshore power grid. Electricity itself is transported by ship, and this company is working to realize the explosive spread of renewable energy.

In May 2023, parent company, Power-X Corporation, concluded a collaboration agreement with the City of Yokohama for the utilization of battery tankers.

Contact

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