

Japan's First Biofuel-Compatible Port Service Vessel Enters Operation at Yokohama Port - Ceremony Features Lorry-to-Ship Bunkering Using Carbon-Credit Biofuel -

Today, Japan's first biofuel-compatible port service vessel (Patrol Boat No.01) entered operation at Yokohama Port. The City of Yokohama has retrofitted this vessel, which is used for marine patrols, with a biofuel-compatible diesel engine developed by Toyota Motor Corporation Marine Business Department, as part of its efforts to advance decarbonization.

In conjunction with the start of operations, SANWA ENERGY Co., Ltd. conducted bunkering with "biofuel with carbon credits" in place of conventional diesel fuel. There was also a ceremony featuring the unveiling of the vessel and a demonstration voyage.

The fuel used on this occasion consists of B5 diesel fuel (diesel fuel blended with 5% biofuel) combined with Idemitsu Carbon Offset Fuel (ICOF) provided by Idemitsu Kosan Co., Ltd. Through this initiative, it becomes possible to virtually offset 100% of the CO₂ emissions generated, therefore advancing the efforts towards the Carbon Neutral Port being promoted by the City of Yokohama.

The City of Yokohama will evaluate the effectiveness of the system's implementation on Patrol Boat No.01 and consider expanding to other vessels.



2nd person from the right: Yasuhiro Shimbo,
Director General, Port & Harbor Bureau, City of Yokohama
(taken in front of the Osanbashi Pier Building)



Lorry-to-Ship Bunkering

1 Organizations taking part in the ceremony

- Engine modification service provider (biofuel-compatible engine developer)
Marine Business Division, Toyota Motor Corporation
- Carbon credit biofuel provider
Idemitsu Kosan Co., Ltd, SANWA ENERGY CO., Ltd.



GREEN x EXPO 2027
YOKOHAMA JAPAN

2027年国際園芸博覧会 2027年3月~9月 横浜・上瀬谷



2 Overview of the biofuel-compatible port service vessel

(1) Specifications

Vessel name	Patrol Boat No. 01
Gross tonnage	3.30 t
Total length	7.01 m
Annual fuel consumption (diesel)	Approx. 5,600 liters (average consumption)



(2) Biofuel-compatible engine

Model	M1GD-VL
Cylinder arrangement/quantity	Inline, 4-cylinder
Inner diameter x stroke (mm)	92 x 103.6
Displacement (cc)	2755
Continuous rated output (kW)	114 (155PS)
Biofuel-compatible	Modifications to the fuel hose, fuel filter rubber part material

(References)

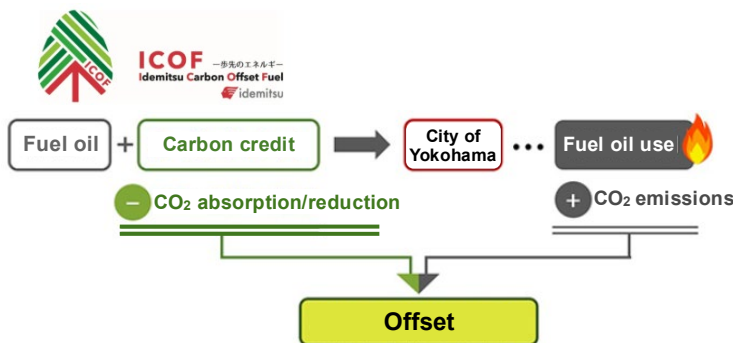
Biodiesel fuel

This is a diesel fuel substitute produced from used cooking oil and plant-based fats and oils. It is considered a “carbon neutral” fuel because the plants used as a raw material absorb CO₂ in the atmosphere during their growth phase, offsetting the CO₂ emissions produced during combustion.

Carbon credits

Carbon credits are a system where companies, local municipalities and other organizations can issue and trade “credits” representing the CO₂ absorption/reduction effects produced from protecting forest areas, afforestation, and the introduction of renewable energy.

The Idemitsu Carbon Offset Fuel (ICOF) supplied for this bunkering operation is a high value-added fuel oil that enables CO₂ emissions from regular fuel use to be offset by the CO₂ reduction/absorption effects provided by carbon credits.



[Reference: Idemitsu Kosan Co., Ltd. website](https://www.idemitsu.com)

[Carbon-Neutral Port Initiatives of the Port of Yokohama](#)

Contact

Hitoshi NAKAMURA, Director for Carbon Neutral Port Promotion, Port and Harbor Bureau
E-mail: kw-seisaku@city.yokohama.lg.jp



GREEN × EXPO 2027
YOKOHAMA JAPAN

2027年国際園芸博覧会 2027年3月～9月 横浜・上瀬谷

