

Daiseki Eco. Solution Commenced Commercial Sale of Its Bio-Diesel Fuel on a Continued Basis **— Recycling Waste Cooking Oils Recovered from the Toyota Group Companies into Marine Fuel Blends —**

Daiseki Eco. Solution Co., Ltd. (“the Company”) has started selling a bio-diesel fuel*1 manufactured by the Company on a continued basis to Toyota Tsusho Corporation (“Toyota Tsusho”) for use by car carriers operated in the Port of Nagoya. Toyota Tsusho, a company engaged in the marine fuel supply business to whom the Company had occasionally sold the bio-diesel fuel (“the biofuel”), mixes the biofuel with low-sulfur Bunker C and supplies the fuel blends to TOYOFUJI SHIPPING CO., LTD. (“Toyofuji Shipping”). This is the first case of continued use of a fuel blend containing a biofuel in Japan.

1. Background and the project summary

A trial navigation of a car carrier Toyofuji Maru (operated by Toyofuji Shipping) using fuel blends composed of the biofuel and a heavy oil was implemented as part of “Survey toward promotion of coastal carbon neutrality” in the supplementary budgets related to Ministry of Land, Infrastructure, Transport and Tourism for 2021, for which the Company supplied the biofuel through Toyota Tsusho. The result of the trial was summarized in the “Guidelines for the use of biofuels in shipping” (March 2023), which showed that the fuel blends could be used with no problem compared to a low sulfur Bunker C in regular operations.

In the light of this result, the Company started selling the biofuel on a continued commercial basis through Toyota Tsusho for use by vessels operated by Toyofuji Shipping. This is the first case of such business arrangement in Japan. The biofuel is manufactured using waste cooking oils collected mainly from the cafeterias of the companies in the Toyota Group and Toyota Tsusho Group as part of the raw materials. The project is expected to serve as an advanced business model that contributes to realizing a circular economy through working with corporate groups.

Through the business of recycling waste cooking oils into biofuels, the Company will continue to strive for a stable supply of high-quality biofuels to contribute to reducing waste and GHG emissions in various industrial fields.

* Bio-diesel fuel (BDF)

BDF is a substitute diesel fuel, refined through the methyl esterification of vegetable fats. It is expected to provide a substitute for heavy oil and diesel fuel sourced from petrol oil. It is regarded as a carbon-neutral fuel over its lifecycle because the plants from which it is sourced absorb CO₂ as they grow.

2. The Company’s previous activities in this business field

- In 2012, the Company commenced manufacturing and selling the biofuel sourced from waste cooking oil recovered from restaurants and other users.
- From 2015 until 2022, upon the request from the Nagoya Municipal Government, the Company manufactured the biofuel by recycling waste cooking oil which citizens brought to supermarkets at about 80 locations in 16 wards across the City of Nagoya, and supplied the fuel to the City’s passenger buses and garbage trucks.
- In 2021, the Company supplied the biofuel to TOYOTA TRANSPORTATION CO., LTD. through Toyota Tsusho.
- In April 2022, the Company supplied the biofuel for the tugboats operated by SANYO KAIJI CO., LTD., an affiliate of Nippon Yusen Kabushiki Kaisha, through Toyota Tsusho.

(<https://contents.xj-storage.jp/xcontents/AS95701/97063fa9/977e/43c6/a285/685fa1b057f0/140120220419523815.pdf>)

- In September 2022, the Company supplied the biofuel through Toyota Tsusho for a trial navigation using fuel blends containing the biofuel, which was conducted as part of “Survey toward promotion of coastal carbon neutrality in the supplementary budgets related to Ministry of Land, Infrastructure, Transport and

Tourism for 2021.

(<https://contents.xj-storage.jp/xcontents/AS95701/bedb68ab/037d/4063/9d1b/dbcbfae1c8e5/140120220909530925.pdf>)

Reference: “Guidelines for the use of biofuels in shipping” (March 2023), Study group on guidelines for the use of biofuels in shipping, Maritime Bureau, Ministry of Land, Infrastructure, Transport and Tourism
https://www.mlit.go.jp/maritime/maritime_tk7_000048.html

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