



Marubeni **JXTG** Nippon Oil & Energy



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Japan Airlines Co., Ltd.

Marubeni Corporation

JXTG Nippon Oil & Energy Corporation

JGC JAPAN CORPORATION

Feasibility Study on Production and Sales of
Sustainable Aviation Fuel Made from Plastic and Other Waste Materials

Japan Airlines Co., Ltd. ("JAL", Headquarters: Shinagawa-ku, Tokyo; Representative Director, Executive President: Yuji Akasaka), Marubeni Corporation ("Marubeni", Headquarters: Chuo-ku, Tokyo; President and CEO: Masumi Kakinoki), JXTG Nippon Oil & Energy Corporation ("JXTG", Headquarters: Chiyoda-ku, Tokyo; President and Representative Director: Katsuyuki Ota), and JGC JAPAN CORPORATION ("JGC", Headquarters: Yokohama-shi, Kanagawa; Representative Director, President: Shoji Yamada) have agreed to jointly conduct a feasibility study on Sustainable Aviation Fuel ("SAF") production and sales in Japan through the use of industrial and municipal waste, including plastic waste.

As the demand for air transport steadily increases, the aviation industry recognizes the importance of working to counter the effects of climate change. Additionally, the International Civil Aviation Organization ("ICAO") has implemented carbon-reduction initiatives from 2021(*1). Currently, SAF is considered to be a realistic and effective means of reducing CO₂ emissions, and there is growing momentum for its adaptation. Furthermore, the disposal and/or processing of plastic waste is a recognized social issue, one to which the world awaits an innovative solution that will lead to a more sustainable society.

In this joint study, the parties plan to evaluate the feasibility of the entire supply chain with respect to creating SAF from industrial and municipal waste, including middle and low grade plastic waste (these types are currently either incinerated, or become landfill), by applying the process and technology of Fulcrum BioEnergy, Inc.(*2), a United States company that produces biojet fuel. JAL, Marubeni, JXTG and JGC have executed an MOU with Taisei Corporation and TAKEEI CORPORATION in February 2020, and each participating company will contribute its respective expertise to study the collection and processing systems of waste, the technological aspects of SAF production, logistics of end-products, and the effect of carbon emissions by LCA(*3). The study will take place from February to December 2020. After that, based on the results of this joint study, all parties will aim to install demonstration equipment and conduct tests in the early 2020s, and start construction of commercial equipment around 2025.

By promoting the development and spread of SAF, all parties will together contribute to the establishment of concrete solutions to societal concerns such as decreasing CO₂ emissions from aviation fuel and plastic waste treatment, thus contributing to a more sustainable future.



JAPAN AIRLINES

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- (*1) In 2016, the ICAO adopted CORSIA (Carbon Offsetting and Reduction Scheme for International Aviation). Under CORSIA, airlines are obligated to procure CO2 emission credit and offset carbon emissions, if the limits are exceeded, so that in entirety the CO2 emissions amount does not increase from 2021. ICAO-certified SAF is allowed to be deducted from the offset obligation.
- (*2) In September 2018, JAL and Marubeni, jointly with Japan Overseas Infrastructure Investment Corporation for Transport & Urban Development, invested into Fulcrum BioEnergy, Inc.

< Reference >

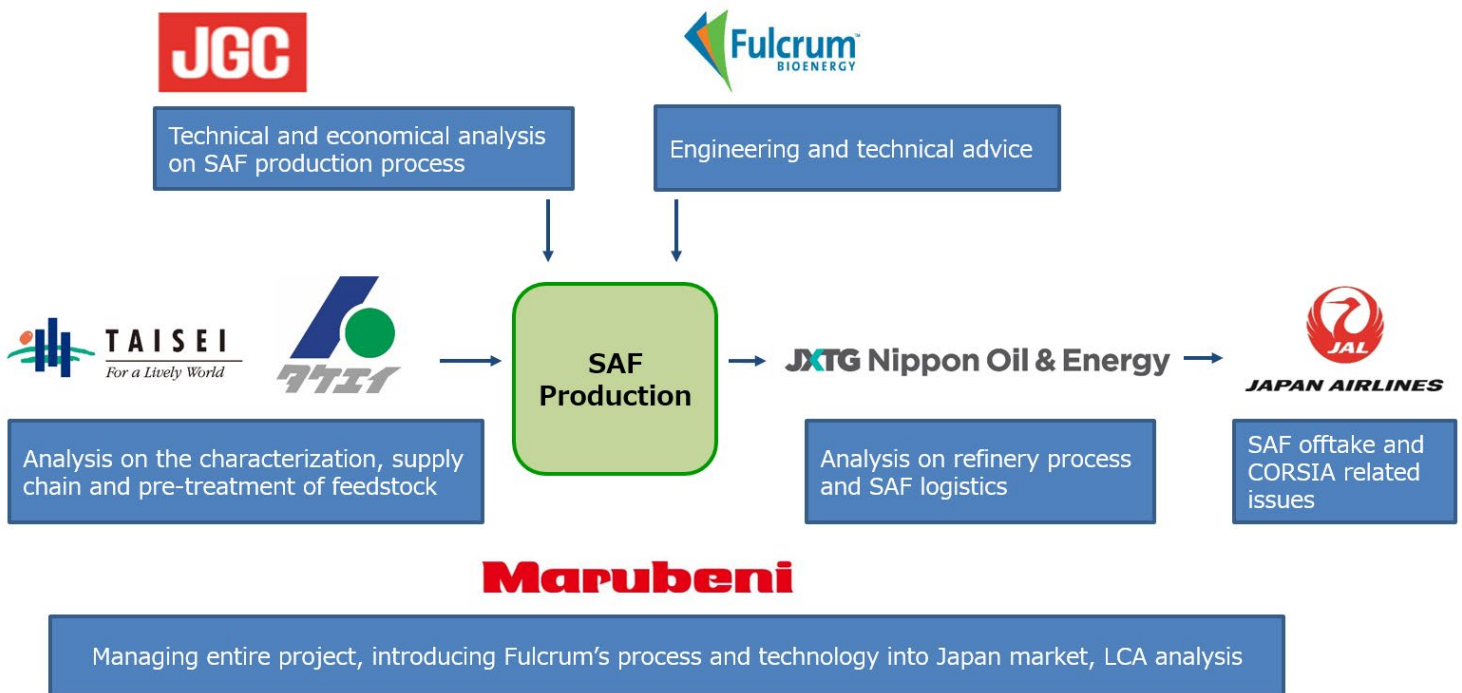
JAL PRESS RELEASE

September 21, 2018 『Japan Airlines Invests in Development of Sustainable Aviation Fuel Technology』

<https://press.jal.co.jp/en/release/201809/004885.html>

- (*3) Life Cycle Assessment : A method to assess environmental impact through the life cycle of a product or service.

< Role of participating companies >



< SDGs related to this joint study >

