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Start of the Study to Build a Value Chain for Sustainable Aviation Fuel with Used Cooking Oil as Feedstock

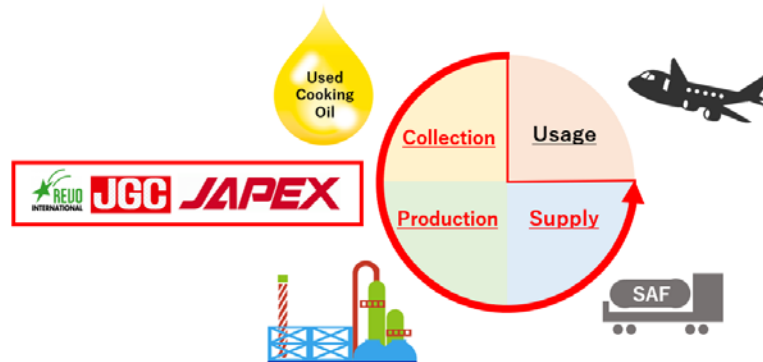
JGC Japan Corporation, Revo International Inc., and Japan Petroleum Exploration Co., Ltd. (hereinafter referred to as “JAPEX”) begin study to build a value chain in Japan for next-generation aviation fuel SAF (Sustainable Aviation Fuel) that utilizes used cooking oil as feedstock in January 2020.

The International Civil Aviation Organization (ICAO) decided in 2016 “not to increase total CO₂ emissions in the international aviation sector from 2020” as an initiative by the aviation industry requiring rapid action to reduce emissions of greenhouse gases (GHG) worldwide. Based on such a decision, in the aviation industry the development of a stable supply of SAF has been expected, derived from biomass sources, including urban waste, vegetable oil, animal fats, used cooking oil, and lumber, and emissions from steel plants and refineries. Commercialization of aviation fuel utilizing SAF is already moving forward especially in the US and Europe, though still limited as a percentage of total aviation fuel. While Japan’s aviation industry is also proceeding with studies and demonstration tests of SAF through public and private efforts, production costs and stable supply of SAF are issues. The industry has an urgent need to establish a stable SAF supply chain in Japan with reasonable economics.

In light of these conditions, JGC, which possesses extensive experience building plants and facilities and is actively promoting the development of environmental business, Revo International, which has a long-term track record of production and supply of biodiesel fuel made from used cooking oil, and JAPEX, which is experienced in oil and natural gas E&P (exploration, development, production and supply) and is pursuing the development of next-generation technologies utilizing knowhow in such areas (hereinafter collectively referred to as “the Companies”), decided to conduct a joint study for the establishment of an SAF production system and to build a value chain in Japan.

The goal of the study aims to quickly realize SAF production with used cooking oil as feedstock in Japan by deploying proven technology which is already applied to the existing plants in the US and other locations. In this study, the Companies will be supported by airlines as the SAF off-takers, domestic oil refining industries with an existing jet fuel supply chain and related governmental agencies, and will focus on establishing an efficient collection network of used cooking oil. The Companies plan to conduct a feasibility study for the production and supply of SAF that employs used cooking oil as the raw material within 2020, and then aim to build an SAF value chain in Japan through promotion. Through the study, the Companies aim to contribute to the establishment of a sustainable and circular society from the perspective of reducing GHG emissions and recycling waste.

Reference: Schematic for SAF Supply Chain



JGC Japan Corporation

JGC Japan Corporation, which operates the domestic EPC business of the JGC Group, possesses experience in building many plants and facilities in energy, general industrial, and other fields in Japan as an engineering firm. It is also accelerating the sustainability-oriented business focused on new environmental technologies, such as implementing construction projects for renewable energy power plants, developing CCUS (Carbon Capture, Utilize, and Storage) technology, and promoting a gasification chemical cycle for waste plastics.

In the subject collaboration, JGC aims to contribute to the optimization of the overall value chain and proposal and construction of efficient and economical production facilities by utilizing various engineering technologies and project management capabilities cultivated in JGC's past activities.

Web page: <https://www.jgc.com/jp/>

Revo International

Revo International has built a unique track record as a pioneer, including the formation of a transaction network for used cooking oil nationwide, production and sales of biodiesel fuels in Japan and other countries over many years with its proprietary manufacturing process, establishment of integrated operations covering raw material procurement, technology development, and production and sales, and cooperation in formulating Japan's first quality standards.

It intends to further expand the transaction network for used cooking oil and ramp up procurement of new raw material fats. In the subject collaboration, it hopes to create domestic demand, broaden use as biomass cyclical resources, and build local cyclical ecosystems.

Web page: <http://www.e-revo.jp/>

Japan Petroleum Exploration Co., Ltd. (JAPEX)

JAPEX implements oil and natural gas E&P (exploration, development and production) in Japan and other countries and has built unique solutions related to oil and natural gas products and supply, including the operation of Japan's first liquefied natural gas (LNG) production plant and the realization of LNG tank containers on railways, as well as supply and sales of crude oil, oil products and natural gas. It also promotes initiatives that contribute to reduced carbon levels and decarbonization by developing sustainable energy and development CCS (Carbon Dioxide Capture and Storage) and CCUS technologies.

In the subject study, it intends to contribute to business realization and value chain construction by leveraging past participation in the "Initiatives for Next Generation Aviation Fuels (INAF)" that brought together public and private entities from Japan and other countries in 2014-15, and its experience and knowledge of the supply and sales of crude oil, natural gas and oil products, and facility operations.

Web page: <https://www.japex.co.jp/>