

June 6, 2024

**Adopted by Tokyo Metropolitan Government for Feasibility Study  
For the Production of SAF from Municipal Waste.**

**～ Feasibility Study on SAF using Bioethanol Derived from Municipal Waste ～**

Hitachi Zosen Corporation proposed the “Feasibility Study on SAF using Bioethanol Derived from Municipal Waste (hereafter ‘FS Survey’)” in the “Feasibility Study for the Production of SAF from Municipal Waste”, which Tokyo Metropolitan Government publicly invited applications in April 2024, and the proposal has been adopted.

The Tokyo Metropolitan Government is considering the active use of “Sustainable Aviation Fuel (SAF)”, which can be produced from a variety of raw materials in order to decarbonize the aviation sector, as aviation supports and important part of the city’s vitality, including domestic and international exchanges, the lives of Tokyo residents, and economic activities, with its Haneda Airport.

The requirements of this FS study include the production of SAF from municipal waste in Tokyo and a feasibility study on the scale of a mass production plant with a view to future SAF commercialization. Hitachi Zosen will apply its unique “two-stage biomass raw fuel conversion system” to convert biomass in municipal waste into ethanol and consider models such as supplying bioethanol to SAF producers.

Municipal waste contains biomass such as kitchen waste and paper, which is a very promising raw material from the viewpoints of sustainability of SAF and domestic SAF production. Hitachi Zosen will consider SAF production using bioethanol production techniques in this FS study and aim for early social implementation.

The FS study will be conducted in cooperation with the Clean Authority of Tokyo, which is responsible for the joint processing of combustible waste and other waste in Tokyo.

In 2008, Hitachi Zosen began research and development to produce bioethanol from kitchen waste and paper contained in municipal waste, with the aim of promoting resource recycling of waste and improving the energy recovery rate. In FY2011, Hitachi Zosen also developed bioethanol production technology, for a demonstration project sponsored by the Ministry of the Environment, which accepts 1 ton of municipal waste per batch and performs all processes from mechanical sorting to ethanol production in an integrated manner, with the cooperation of Kyoto City. Furthermore, in FY2013, Hitachi Zosen developed a ‘two-stage biomass raw fuel conversion system’ in a demonstration project also by the Ministry of the Environment, using 5 tons of municipal waste per batch, increasing the size of the system and upgrading the technology.

The two-stage biomass raw fuel conversion system is characterized by a complex waste treatment system that uses a proprietary mechanical sorting technology to precisely sort biomass materials from mixed collected waste and convert waste biomass into energy and resources in a highly efficient manner.

Hitachi Zosen will contribute to SAF production and a resource-recycling society through active social implementation and business development of this technology.

The outline of the FS survey is as follows.

1. Publicly solicited by: Tokyo Metropolitan Government
2. Project name : FS survey for the Production of SAF using Municipal Waste
3. Name of theme : Feasibility Study on SAF using Bioethanol Derived from Municipal Waste
4. Implementor : Hitachi Zosen Corporation
5. Period : From the date of agreement to March 31, 2025