



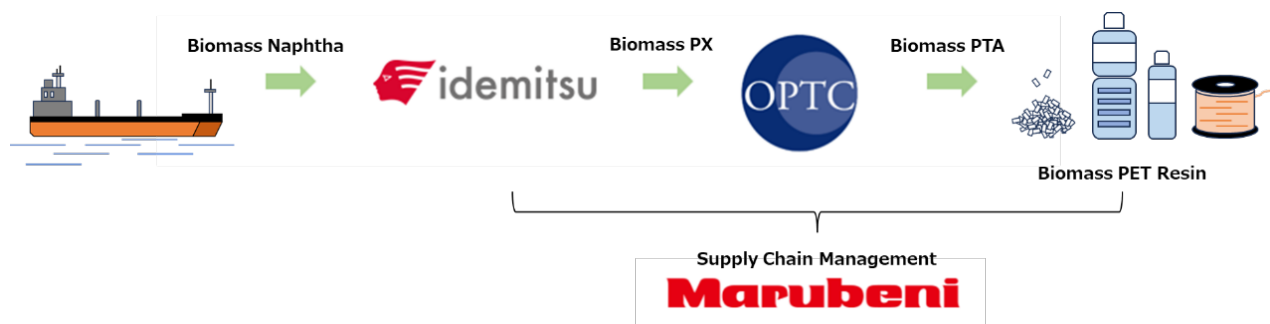
December 21, 2023

Press Release

Company Name: Idemitsu Kosan Co.,Ltd.  
Representative Director & Chief Executive Officer:  
Shunichi Kito  
(Company Code: 5019, TSE Prime Market)  
Contact person: Daisuke Mogi, General  
Manager

## Idemitsu Kosan, OPTC, and Marubeni Corporation Establish a Supply Chain for Biomass PTA: Contributing to Biomass PET Resin Production

Idemitsu Kosan Co., Ltd. (hereinafter, “Idemitsu Kosan”), Oriental Petrochemical (Taiwan) Co., Ltd. (hereinafter, “OPTC”) and Marubeni Corporation (hereinafter, “Marubeni”), are pleased to announce that they have agreed to establish a supply chain for biomass Purified Terephthalic Acid\*1 (hereinafter, “PTA”) produced from biomass naphtha. Production of biomass PTA is planned to begin in 2024 in Taiwan, the first time it will be produced there.



Idemitsu Kosan will produce biomass PX\*2 (hereinafter, “Paraxylene”) from biomass naphtha using the mass balance method\*3. It will then be converted to biomass PTA by OPTC, a PTA manufacturer under the Far Eastern New Century Group (a PET manufacturing company in Taiwan). Marubeni will be coordinating the management of the supply chain’s establishment as well as the marketing of the biomass products.

PET resin, the raw material for PET bottles, is composed of approximately 70% PTA and 30% ethylene glycol. Therefore, by using biomass PTA and biomass ethylene glycol, 100% biomass-derived PET resin can be produced. While biomass ethylene glycol has become increasingly popular, replacing petroleum-derived PTA with biomass-derived PTA has been a challenge.

Biomass naphtha, the raw material for biomass products, is manufactured from raw materials derived from renewable materials such as plants, and can thus reduce CO2 emissions compared to naphtha derived from petroleum. The biomass PX manufactured by Idemitsu Kosan obtained the international certification “ISCC PLUS Certification”\*4, which manages and ensures the supply chain of products made from sustainable raw materials such as biomass and allows the application of the mass balance method. OPTC will also obtain “ISCC PLUS Certification” in 2024.

Through this newly established supply chain, the three companies will contribute to CO2 reduction in the plastics industry and the swifter realization of a low-carbon society.

**\*1 PTA (Purified Terephthalic Acid)**

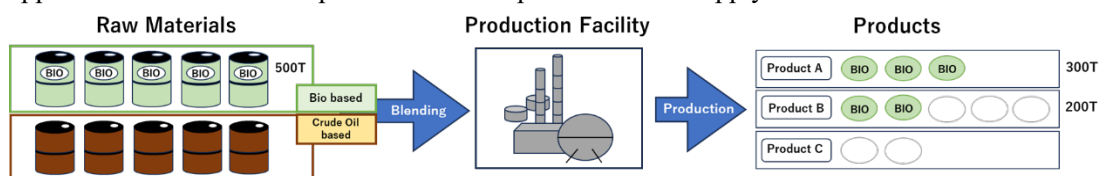
An aromatic carboxylic acid. Polyethylene terephthalate (PET) is made from the reaction of PTA (about 70%) with ethylene glycol (about 30%). PET resin is a raw material for polyester fiber and plastic bottle resin.

**\*2 PX (Paraxylene)**

An aromatic hydrocarbon. It is a raw material for purified terephthalic acid (PTA), which is used to make polyester fiber and plastic bottle resin.

**\*3 Mass Balance Method**

A method in which raw materials with certain characteristics (e.g., biomass-derived raw materials) are mixed with other raw materials (e.g., petroleum-derived raw materials) in the processing and distribution process from raw materials to finished products. These characteristics are assigned to a portion of the product in accordance with the amount of input of the raw materials with the same characteristics. In the chemicals industry, where products are typically manufactured through multiple production processes, the mass balance method is considered an effective approach to accelerate the spread of biomass products in the supply chain.



**\*4 ISCC PLUS certification**

ISCC PLUS certification is an international system that manages and ensures that products in a supply chain are made from sustainable raw materials, such as biomass, and allows the application of the mass balance method.

**Overview of Companies:**

**Idemitsu Kosan**

Company Name: Idemitsu Kosan Co., Ltd.  
Head Office: 2-1, Otemachi 1-chome, Chiyoda-ku, Tokyo 100-8321, Japan  
Established: 1940  
Representative: Shunichi Kito  
Main Business: Idemitsu Kosan Co., Ltd. is a global energy company whose main business is oil refining and sales of petroleum & petrochemical products. We commit to the security of a stable energy supply, while transforming into a resilient business entity, answering to an ever changing economic and environmental needs of the society, by expanding the following five business segments both domestically and abroad: Petroleum, Basic Chemicals, Functional Materials, Power & Renewable Energy, and Resources.

Website: <https://www.idemitsu.com/en/index.html>

**OPTC**

Company Name: Oriental Petrochemical (Taiwan) Co., Ltd.  
Head Office: No. 47, Jingjian 4th Rd., Guanyin Dist., Taoyuan City 32853, Taiwan (R.O.C.)  
Established: 1987  
Representative: Eric Chueh  
Main Business: OPTC, with the largest PTA manufacturing capacity in Taiwan, is a subsidiary of the Far Eastern New Century Group (FENC Group) and plays a central role in the petrochemical division of the group. FENC Group is a leading conglomerate in Taiwan with diversified business operations, including petrochemicals, chemical fibers, textile apparel, cement, hotels/finance, and more.

Website: <http://pta-trade.com.tw/product.htm>

Marubeni

Company Name: Marubeni Corporation  
Head Office: 4-2, Ohtemachi 1-chome, Chiyoda-ku, Tokyo 100-8088, Japan  
Established: 1949  
Representative: Masumi Kakinoki  
Main Business: Marubeni Corporation and its consolidated subsidiaries use their broad business networks, both within Japan and overseas, to conduct importing and exporting (including third country trading), as well as domestic business, encompassing a diverse range of business activities across wide-ranging fields including lifestyle, IT solutions, food, agri business, forest products, chemicals, metals & mineral resources, energy, power, infrastructure project, aerospace & ship, finance, leasing & real estate business, construction, industrial machinery & mobility, next generation business development and next generation corporate development. Additionally, the Marubeni Group offers a variety of services, makes internal and external investments, and is involved in resource development throughout all of the above industries.

Website: <https://www.marubeni.com/en/>

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