

July 31, 2026

Zeon announces completion of bench-scale facility for highly efficient butadiene production from plant-based ethanol for both realizing a carbon-neutral society and enhancing business sustainability

Zeon Corporation (Zeon; head office: Chiyoda-ku, Tokyo; President and CEO: Tetsuya Toyoshima) has completed construction of a bench-scale facility at its Tokuyama Plant (Shunan City, Yamaguchi Prefecture) to demonstrate technology for highly efficient production of butadiene from ethanol derived from plant-based and other sustainable materials. Construction of the facility began in July 2025. This technology will advance the realization of a carbon-neutral society through the use of non-fossil resources and enhance business sustainability by establishing a new, naphtha-independent method of sourcing raw materials. The facility is scheduled to begin full-scale operation in January 2027 toward achieving commercialization by 2034.

A ceremony marking the facility's completion was held at the site on July 31, 2026, attended by 46 people including guests from the Ministry of Economy, Trade and Industry (METI), the New Energy and Industrial Technology Development Organization (NEDO), Yamaguchi Prefecture, Shunan City, and Yokohama Rubber, as well as representatives from the construction contractor and other related companies, along with Zeon officials including Corporate Officer and Tokuyama Plant Manager Akira Honma.

This project is one of two R&D themes being undertaken by Zeon and The Yokohama Rubber Co., Ltd. (Yokohama Rubber; Chairman and CEO: Masataka Yamaishi) and supported by NEDO's Green Innovation Fund Projects. The two companies aim to achieve the social implementation in the 2030s of technology for the highly efficient production of butadiene and isoprene from plant-based and other sustainable materials. Zeon will develop a prototype polybutadiene rubber (butadiene rubber) using butadiene made at the bench-scale facility. Yokohama Rubber will then develop prototype tires using the butadiene rubber and conduct driving tests to collect data for a large-scale demonstration.

The two companies intend to establish the technology for social implementation by 2030 using a pilot facility to demonstrate the technology, which is targeted for commercialization in 2034.

The work reported here was carried out as part of a project subsidized by NEDO.



Two R&D themes selected by NEDO

1. Highly efficient butadiene synthesis using ethanol

- Proposed by: Zeon and Yokohama Rubber
- Subcontractor and cooperating entity: National Institute of Advanced Industrial Science and Technology
- Project overview: Development of technology for the highly efficient conversion of ethanol derived from plant-based and other sustainable materials into butadiene with the aim of establishing the technology required for social implementation using a pilot facility by 2030 and commercializing the technology in 2034.

2. Development of technology for production of butadiene and isoprene from plant-based and other sustainable materials

- Proposed by: Zeon and Yokohama Rubber
- Subcontractors and cooperating entities: Institute of Science Tokyo and RIKEN
- Project overview: Development of a biotechnology to directly produce butadiene and isoprene from plant-based raw materials, thereby supplementing the supply of core chemicals used to produce synthetic rubber in the closed-loop recycling of rubber and tires, with the technology targeted for commercialization in 2034.

NEDO's Green Innovation Fund Projects

METI established the Green Innovation Fund Projects to accelerate innovation through structural transformation of the energy and industrial sectors and bold investment toward achieving Japan's national goal of reducing overall greenhouse gas emissions to zero by 2050. Under the program, companies and other organizations that treat this goal as a management priority receive 10 years of ongoing support, from R&D and demonstration to social implementation.



Related Press Releases

February 21, 2022:

Zeon and Yokohama Rubber's development of manufacturing technology for synthetic rubber core chemicals with carbon resource recycling selected for NEDO's Green Innovation Fund Projects (Japanese only)

February 17, 2025:

[Zeon & Yokohama Rubber installing a bench facility for highly efficient production of butadiene from ethanol derived from plant-based materials](#)

July 10, 2025:

[Zeon begins construction of a bench-scale facility for highly efficient butadiene production from plant-based ethanol, aiming for operation in 2026 and commercialization in 2034](#)

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