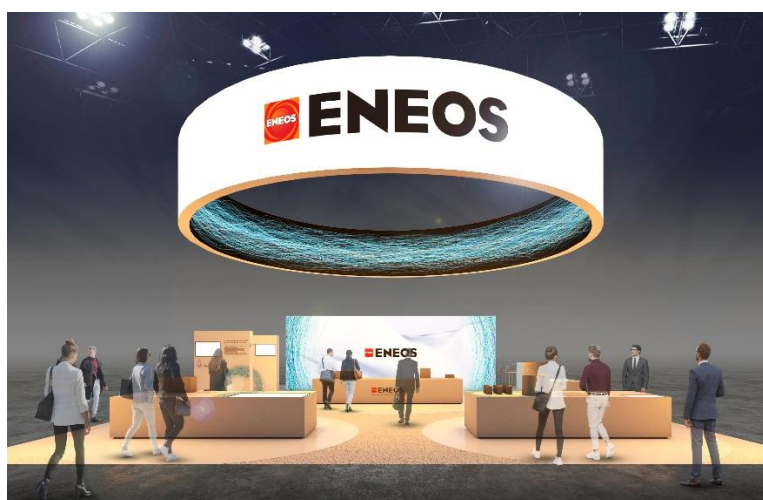


December 10 , 2024
ENEOS Holdings, Inc.

ENEOS will Exhibit at CES® 2025!



ENEOS Holdings, Inc. (Representative Director, CEO: Miyata Tomohide, hereinafter “ENEOS Holdings”) will exhibit at CES® 2025 held in Las Vegas, Nevada from January 7 to 10, 2025.

CES® is one of the world's largest technology trade fairs, showcasing the latest technologies from over 4,000 companies ranging from multinational corporations to startups. Over 70 other Japanese brands took part in the last show along with ENEOS Corporation. 130,000 visitors from 150 countries visited the show. For the first time after the brand's debut at CES® by ENEOS Corporation in 2023, ENEOS Holdings will exhibit cutting-edge technologies and solutions from the entire Group at CES® 2025.

The main exhibits include Direct MCH®※¹, a pioneering technology which made the world's first-ever successful technology demonstration towards hydrogen society, and research and development examples of Synthetic Fuel, Lubricants and CCUS or Carbon Dioxide Capture, Utilization and Storage. The exhibitions will highlight the Group's groundbreaking efforts and technologies driving a significant progress towards a carbon-neutral society.

ENEOS Group has set forth in its long-term vision the challenge of achieving both “stable supply of energy and materials” and “carbon neutral society,” and is committed to creation and innovation in energy, resources, and materials. Our commitment lies in our support “today’s normal” and taking the lead for “tomorrow’s normal”.

Through this exhibition, we will promote its energy transition initiatives in order to continue to fulfill its “today’s” responsibility of providing a stable supply of energy and materials in its global operations, while also fulfilling its responsibility for “tomorrow”.

*1 Direct MCH[®] is a registered trademark of ENEOS Corporation.

【Exhibition Outline】

Dates : Tuesday, 7th January to Friday, 10th January, 2025 *local time

Venue: Las Vegas Convention Center (LVCC), Las Vegas, NV, USA

Our Booth: LVCC North Hall Booth #9827

An overview of our exhibit at CES[®] 2025 is found here:

<https://www.hd.eneos.co.jp/english/news/eneosways/articles/ces2025/>

【Exhibition】

■Hydrogen Supply Chain

MCH (Methylcyclohexane)

The strategy involves producing MCH overseas, transporting it to Japan, and then receiving it at ENEOS refineries to distribute hydrogen to local consumers. By utilizing the existing infrastructure as is for the hydrogen supply chain, costs are reduced, contributing to the early implementation of hydrogen in society and providing advanced hydrogen solutions. In ENEOS 2040 vision, the company aims to supply 1-4 million tons of hydrogen annually, partnering with companies worldwide to achieve a carbon-neutral future.

Direct MCH[®]

ENEOS is pioneering research and development in hydrogen carriers. ENEOS’s proprietary Direct MCH[®] technology enables MCH to be produced by a simple process with only an electrolyzer. It is drawing attention as the world’s first attempt to reduce capital investment and improve energy efficiency and is establishing a leading role in the inexpensive supply of hydrogen.



■ Synthetic Fuels

A clean liquid fuel called “synthetic fuel” is made from just two raw materials: CO₂ captured from industrial emissions or the atmosphere, and hydrogen derived from renewable energy. It is possible for this fuel to replace conventional fuels. As a next-generation fuel, it can be introduced globally with minimal initial investment, as it enables the continued use of existing infrastructure and transportation methods, not only in mobility but across multiple sectors.

■ CCS/CCUS

(Carbon dioxide Capture and Storage / Carbon dioxide Capture, Utilization, and Storage)

Amid the promotion of CO₂ reduction as a measure to combat global warming*¹, JX Nippon Oil & Gas Exploration*², which has been responsible for the development and production of oil and natural gas within the ENEOS Group, is leveraging its strengths in subsurface technology to pioneer CCS—separating and capturing CO₂ and injecting it underground for storage—and CCUS technology, which not only injects the captured CO₂ underground but also reuses it. These efforts position JX Nippon Oil & Gas Exploration*² at the forefront globally.

*¹ According to the International Energy Agency (IEA), CCUS is expected to account for 15% of the CO₂ reductions needed by 2070.

*² The company name is scheduled to be changed to ENEOS Xplora on January 1, 2025.

■ Lubricants

ENEOS GX Series

ENEOS is advancing its contribution to a carbon-neutral society with the launch of the ENEOS GX (Green Transformation) Series. Utilizing 100% plant-based biomass base oils, this series reduces CO₂ emissions throughout the product lifecycle—from raw material procurement to product shipment—significantly compared to general products. Additionally, our proprietary technology allows the GX Series to maintain high energy-saving performance and long-lasting durability.

EV/HYBRID series

Leveraging extensive experience in automotive lubricant development, ENEOS has created our own unique EV Fluids, innovative lubricants specifically designed for the drive systems of electric vehicles (EVs) and hybrid vehicles (HEVs).

ENEOS IX Series

With the rapid development of digital technology such as generative AI, power consumption in data centers is increasing. This can largely be broken down into the increase in power consumption due to increased server capabilities and the increase in power consumption to cool the increased heat generated by such increased capabilities. Regarding the latter in particular, it is possible to reduce power consumption by optimizing cooling technology. The ENEOS IX series is an efficient cooling fluid in server cooling systems.

Thermal Grease

ENEOS has been developing thermal grease, a type of thermal interface materials (TIM). ENEOS Thermal Grease achieves high thermal conductivity, prevention of contact defects, and excellent workability that leverages the grease manufacturing technology and additive compounding technology we have cultivated to date. It contributes to advanced digitalization and energy saving in next-generation electronics.

■ Basic Chemicals

Green Chemical

ENEOS is advancing its green chemical business to contribute to reducing environmental impact and promoting resource recycling. Green chemicals are innovative raw materials, which are divided into two types: Biomass-based products (Chemical products utilizing materials such as used cooking oil and residues from non-edible plant oils) and recycled products (Chemical products leveraging oil-derived waste plastics as raw materials).

■ Matlantis™

Matlantis™ is a cutting-edge, universal atomic-level simulator jointly developed by ENEOS and Preferred Networks.

It incorporates a proprietary Neural Network Potential (NNP) based on AI deep learning technology, and it reduces the calculation cost used for physical simulation significantly. When it is combined with the Global Reaction Route Mapping (GRRM) program for automatic exploration of chemical reaction pathways, it creates breakthroughs in the discovery of new chemistry.